

BUSINESS WEEK

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Can You Believe
the Figures

ON BUSINESS CONDITIONS?
PAGE 113



Collins of Collins Radio: Every engineer is a ham at heart (page 74)

A MCGRAW-HILL PUBLICATION

MAR. 13, 1954

CS BN 1
UNIVERSITY MICROFILMS IN
313 N 1 ST
ANN ARBOR MICH
C



...and the corn came tumblin' down

AS NO. 1 MENACE to our No. 1 food crop, soil pests like corn rootworms reduce yields by as much as *fifty per cent*.

Highly destructive, these sub-surface pests feast on tender young roots to stunt plant growth. Root structure is so weakened by these attacks that the wind lays entire fields flat.

Shell Chemical now gives farmers a potent weapon against such attack—Aldrin. Easily applied before or during corn planting as a spray or in fertilizer mixtures, Aldrin kills pests when

inhaled, eaten or touched. One application remains effective for months and as little as half a pound protects an acre of land from corn rootworms. A pound of Aldrin provides control of these additional pests—wireworms, seed-corn maggots, white grubs, cutworms, seed-corn beetles, cornfield ants, and grape colaspis. All cornfield soil pests succumb to Aldrin, properly applied to soil.

Aldrin for farm use is another example of Shell Chemical's partnership with industry and agriculture.

Shell Chemical Corporation

Chemical Partner of Industry and Agriculture

NEW YORK • SAN FRANCISCO





A four-year-old child
was up on a roof



A dog was caught
in a fence



A boy was playing with
sticks of dynamite



A plumber was needed
in a hurry



A baby was about
to be born



A house was
on fire

Just a few of the emergency calls handled recently by one telephone central office.

The Spirit of Service

Calls like these are familiar to telephone people everywhere. We know them well.

What they say so plainly is that our work lies at the very heart of life. We are in the thick of it. And the way we act matters.

For day in and day out, minute by minute, we are serving the needs of the people. Our entire business—everything about it—exists in

order that we may render service.

Out of this experience comes a certain attitude of telephone people that is one of our most precious assets. It is The Spirit of Service.

It begins with a sense of responsibility and shows itself in a sort of combination of knowing-how and wanting-to-do.

We know that without it there would still be telephone service of

a sort. But it wouldn't be the same. And we wouldn't be the same people either. For the spirit that brings the most to the job, likewise returns the most to the people who give it.

Much has been done. But telephone men and women know that all that the years have brought is but the beginning.

Our opportunities for Service open wide before us.

BELL TELEPHONE SYSTEM

LOCAL to serve the community. NATIONWIDE to serve the nation.



Ham on Rye or Rye on Hand?



Count BOTH

(and 1,001 Other Items)

with this New Veeder-Root

VARY-TALLY

Multiple-Unit Reset Counter

Knowing how many apple versus lemon pies, for instance, are ordered on a given day . . . or how many cases of what are in the cellar . . . helps a restaurant *control*, make plans, make profits. The same goes for a manufacturer or wholesaler seeking tighter inventory control . . . or for any of the following:

- Traffic Engineers
- Schools and Colleges
- Nurserymen and Florists
- State Park and Forest Services
- Laboratories
- Milk Plants and Ice Cream Processors
- Researchers
- Industrial Plants
- Textile Mills
- Inspection and Quality Control
- Jobbers, Wholesalers, Distributors

- Restaurants and Hotels
- Mail and Phone Order Departments
- Laundries and Linen Supply Houses
- Manufacturers of equipment for:
 - Order Control
 - Stock Control
 - Inventory Control
 - Traffic Control
 - Sales and Market Analysis
 - Laboratory Analysis
 - Payroll Preparation
- and What Do You Want to Count?

Arranged compactly on stands in tiers, the Vary-Tally can be supplied in any of 66 combinations, up to 6 banks high and 12 units wide, with a minimum of 2 units wide. Write for news sheet and prices.

The Name that Counts



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Typical classroom, Wakelon Public School, Zebulon, N. C. Architect: Page & Smith, Raleigh, N. C. Heating Contractor: Bullock & Proctor, Raleigh, N. C.

Schools by PAGE & SMITH USE WEBSTER

TRU-PERIMETER HEATING

Wakelon Public School is typical of the modern, low-cost schools in North Carolina designed by Page & Smith, Raleigh, and using Webster Steam Heating Equipment.

Examine the pleasing interior illustrated above. Note the wall-to-wall installation of Webster Walvector blanketing the entire window area and concealing all piping except for hand valve at left.

Webster Tru-Perimeter Heating provides draft-free comfort with window ventilation. The entire heating contract for the six-room school with cafeteria was \$11,585, only 9% of the total construction cost.

In addition to Webster Walvector, Webster Equipment for school heating includes: steam heating specialties such as traps, valves and strainers; central Webster Moderator Controls; Webster CF-3 Hot Water Heating Controls; Webster Convectors; Webster-Nesbitt Unit Heaters.

Interested in further facts about money saving in school heating? Get in touch with your Webster Representative, or write us.

Address Dept. BW-3

WARREN WEBSTER & CO.
 Camden 5, N.J. Representatives in Principal Cities
 In Canada, Darling Brothers, Limited, Montreal

Webster
WALVECTOR
 For Steam or Hot Water Heating

BUSINESS WEEK • MAR. 13 • NUMBER 1280

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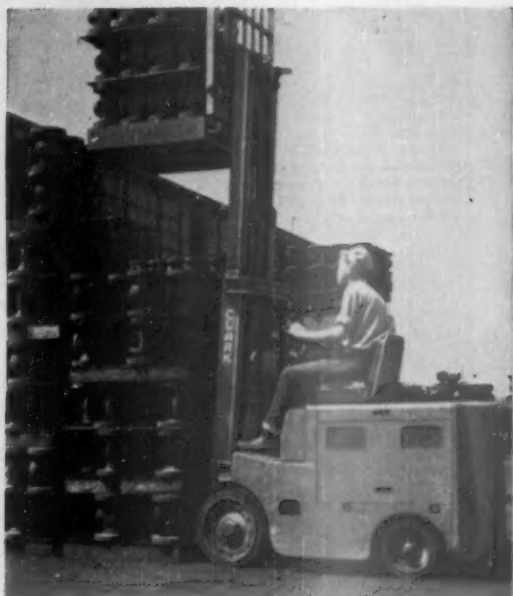
A Day in the Life of a Clark Fork Truck



7:30 A. M. A barrel of cutting oil goes to the automatic screw machine department firmly supported between the forks of the Clark truck. Special handling equipment is eliminated.



8:40 A. M.
A heavy, hard-to-hoist steel slab is fed directly into a heat-treat furnace. What used to be a dangerous, back-breaking job is now quick, safe and easy.

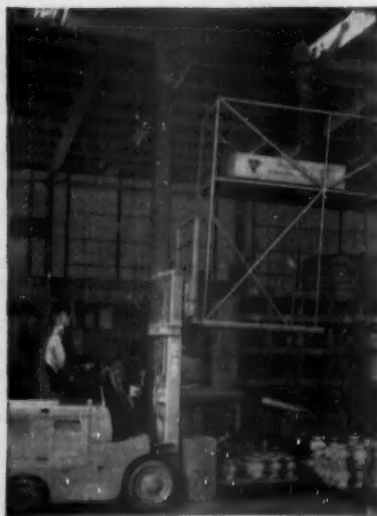


9:12 A. M. Rough castings of valve bodies are picked up from outside overhead storage for delivery to boring mills. The Clark electric truck is just as efficient on good surfaces outdoors as inside.

HOW EDWARD VALVES, Inc., SAVES



9:05 A. M. Clark truck dumps tote box of forgings into heat treating basket. Filling a basket, each of which holds 1500 to 2000 lbs., takes less than three minutes.



10:00 A. M. The Maintenance Department calls for the Clark to replace a fluorescent tube in a high fixture. No more two-man teams to carry and hold a ladder; far less chance of an accident; big saving in time.



10:30 A. M.
Cutting set-up time for positioning a new die in a forge-shop hammer—a Clark fork truck with only one man to guide the die. The Clark moves easily where ordinary hoists are difficult to use.



11:20 A.M.

Back to work for the maintenance department, the Clark truck moves a welding machine to a new location. At least one Clark truck is always ready for off-shift maintenance jobs.



3:20 P.M.

Into a highway trailer truck goes a load of valves for shipment. Direct, one-operation truck loading means savings in the shipping department, quicker conversion of finished orders into billings.



1:10 P.M.

In the finished parts stores department the Clark high-stacks a tote box of parts from the lathes. Edward conserves valuable production floor space by cubic-foot, instead of square-foot, storage.

MATERIALS HANDLING DOLLARS BY USING CLARK TRUCKS



2:35 P.M.

A finished valve goes to the shipping department. Using Clark trucks eliminates many skidding operations, cuts crating costs for Edward Valves.

"We've declared war on materials handling costs," says W. F. Crawford, President of Edward Valves, Inc., East Chicago, Ind., Subsidiary of Rockwell Manufacturing Co. "Every day we're studying another handling operation to see if there isn't a quicker way to do it with less fatigue for the workman and lower costs."

"Clark trucks—both electric powered fork trucks and **POWER-WORKER** hand trucks—are a key weapon. We've used Clarks for

12 years, because they cost less to operate and do more jobs. Versatility is important in a plant our size; to really save money with lift trucks you've got to keep them busy doing many different operations."

Here are a few of the dozens of operations on which Edward Valves, Inc., has cut profit-eating indirect costs by using Clark Equipment.

**INDUSTRIAL TRUCK DIVISION
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BATTLE CREEK 42, MICHIGAN**

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The Bambino operates in full daylight . . .

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Begin now to save time, work and money with direct copies by the new low cost Bambino. Your nearest Ozalid representative is listed in your classified telephone directory under "Duplicating," phone him today or mail coupon below.

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**Write today for full details on the amazing new
BAMBINO by Ozalid!**



OZALID, Dept. A-43
General Aniline & Film Corporation
Johnson City, N. Y.

Gentlemen:

- ☐ Have your representative call
☐ I would like to learn more about the Bambino

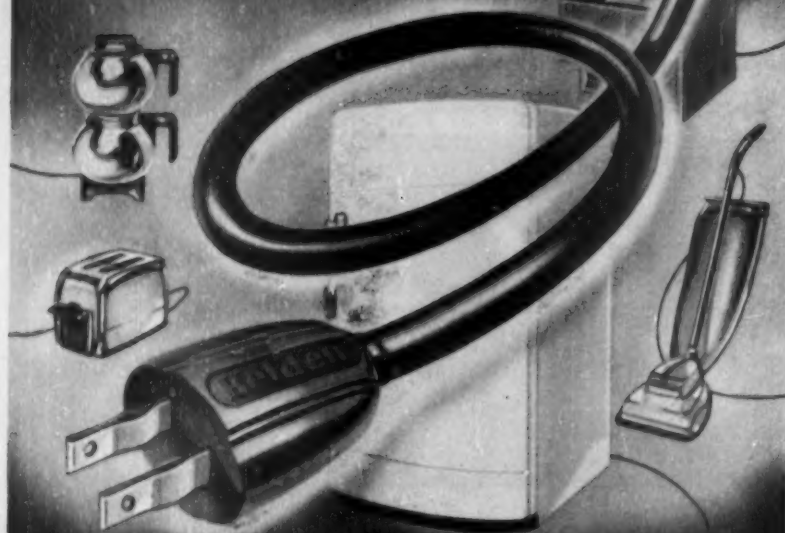
Name.....

Company.....

Your position.....

City.....

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WIREMAKER FOR INDUSTRY

READERS REPORT

What Makes A Salesman?

Dear Sir:

I've read many articles and heard many talks in recent months and years on "the need for salesmen,"—"the passing of salesmen,"—"the failure of salesmen" . . .

It is my belief that these articles, plus some of the remarks of the "old-timers" who had to sell, are having a "reverse English" effect on some of our present crop of fine young men, who are anxious to become successful merchandisers. Some of the articles and remarks of the "old-timers" carry the inference that salesmanship is something mysterious—an aptitude or an ability . . . a hypnotic power, or some other great asset possessed by a limited few.

The oldsters have failed to tell these fine young fellows that salesmanship begins with contact—personal contact—and that many sales result just from an honest and simple explanation of the things a product will do, and that selling power develops only through experience, gradually, and . . . by the everlasting student—the man who learns from each individual contact.

"With \$200-billion in liquid assets and an annual income of \$285-billion" all we need to do is start these young fellows showing, demonstrating, and telling people about our millions of products and services. Sales will result, and we'll develop salesmen, plenty of them, and just as good as any of our old-timers, but they must be encouraged and shown that there is nothing mysterious to good selling . . . and that salesmen are made, not born.

JAMES F. DONNELLY

VICE-PRESIDENT IN CHARGE OF SALES
SERVEL, INC.
EVANSVILLE, IND.

Dangerous Economy?

Dear Sir:

Although your article, *Soviet Hosts Are Tough Traders* [BW—Feb. 20'54, p27], was quite interesting, I was greatly overwhelmed and shocked to realize how quick we are to forget how Japan paid us back in bullets for the steel we . . . sold them to boost our economy.

. . . You mentioned contracts signed to supply Russia with machine tools, textile machinery, diesel generating sets, diesel locomotives, and some drugs.

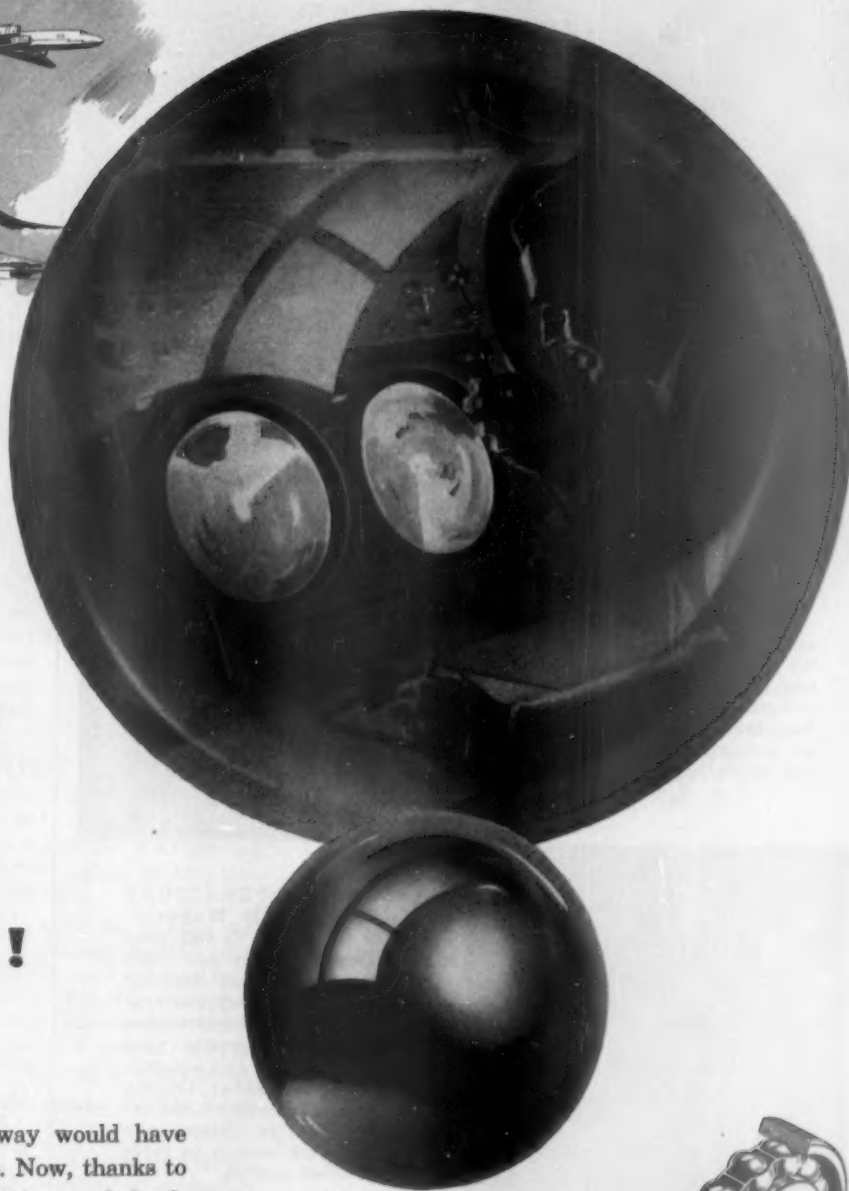
These items mean only the following to me . . . machine tools to produce aircraft, tanks, guns, ships and shells . . . textile machinery to produce uni-



Bendix ground-control system makes "blind" flight possible, uses high-precision New Departure ball bearings.

"sight" for blind flight !

Landing on a fogged-in runway would have been a stunt not too long ago. Now, thanks to great advances in instrumentation, such landings are routine. New Departure has kept pace with these improvements, utilizing the most advanced methods and equipment for the manufacture of instrument bearings to ultra-precision specifications. Wherever you look in the expanding fields of instrumentation—defense or industrial—you'll find New Departures on the job—preserving super-accurate alignment . . . increasing efficiency . . . cutting friction . . . making compact, lightweight designs possible. Look to New Departure for fine **ball** bearings.



NOTHING ROLLS LIKE A BALL



NEW DEPARTURE

BALL BEARINGS

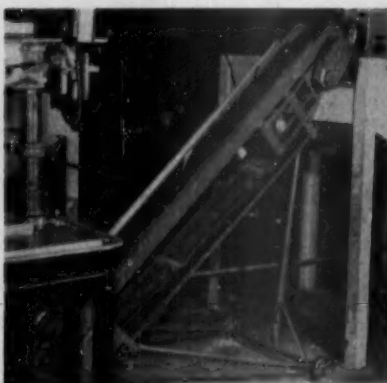
NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONNECTICUT
Plants also in Meriden, Connecticut, and Sandusky, Ohio



HANDLING COSTS CUT WITH CONVEYOR Youngstown Alloy Casting Corporation uses Rapistan gravity wheel conveyors to expedite movement of molds from forming, through drying oven to assembling and on to pouring floor. Further savings are effected by spraying and assembling molds while still on the conveyor, which then passes through drying oven at 600° F. Conveyors had been cutting costs for seven years when picture was taken.

Free *Rapistan* field reports tell Profit Stories like these

MACHINE OUTPUT INCREASED Utica Drop Forge & Tool Company increases operator's productive hours with this Rapistan "LP" cleated belt conveyor. Forgings are automatically elevated from trim press and deposited in sloping bottom bin for delivery to next operation. Operator does no handling; is freed for full time production. Rapistan cleated belt conveyors are available in light, medium and heavy-duty models.



ASSEMBLY OPERATIONS STREAMLINED Magnetic starter assemblies in tote pans flow smoothly from one work point to the next on Rapistan RW gravity wheel conveyor lines in this large midwestern plant. Operators receive pans from one conveyor line and pass them along on another, keeping work space uncluttered and increasing output. Lines are "pitched" just enough to move pans at speed desired.

Gain from this experience

Send today for fact-filled reports on handling problems in your field. Describe your type of business and handling situations of interest to you. We'll send Field Reports telling how other firms solved similar problems.

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CONVEYING EQUIPMENT**

CONVEYORS, gravity and power belt • INDUSTRIAL CASTERS • WHEEL-EZY® TRUCKS

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forms . . . diesel generating sets to produce electricity in the field . . . diesel locomotives to haul troops and supplies . . . drugs to heal sick and wounded soldiers. . .

Do we and our allies need this money and trade so badly that we must jeopardize our very existence?

I, as an American, am not too anxious to have this "economy-building" foreign trade reciprocated ten years hence in the form of a thank-you note delivered by atomic and hydrogen bombs.

Wake up America, and you allied countries—before it is too late, or some night we will go to sleep and never get the opportunity to wake up again. . .

DAVID C. GLUCK

CHICAGO, ILL.

They Were There

Dear Sir:

On page 17 of the Feb. 13 issue of BUSINESS WEEK you state that "Nash, Willys and Studebaker never have been in Michigan."

. . . I believe you will find that Studebaker was located in Detroit for many years prior to moving to South Bend, Ind. The Studebaker plant, now demolished, ran east from Clark Street along West Jefferson Avenue for some distance. . .

PETER LILICY

CONTROLLER

GEMMER MANUFACTURING CO.
DETROIT, MICH.

• Reader Lilicy knows his history and his Detroit. Auto plants of Studebaker were located first in Detroit and Port Huron, Mich., separate units from the wagon works in South Bend. Later, the auto plants were moved to South Bend.

Texans At Sea

Dear Sir:

I was very pleased to read your . . . article about the Texas cruise of the new S.S. "Antilles" . . . [BW—Jan. 23 '54, p. 126]. But, frankly, having been the representative of the French Line in the Southern States for the last twenty years, I cannot say that I agree fully on the deportment of our Texas friends. Sure enough, they had a grand time—but I did not notice any Bourbon on our dining room tables—Bourbon was consumed at the proper time . . . but so were Scotch, champagne, and red and white wines.

From our skipper down to the youngest "mousse" (cabin-boy) our fellows on board are still raving about the cruise from Texas and I may add that, after thirty-four years with the French Line, never have I met a more pleasant and



Does your payroll system burn up money?

Eminent authorities agree that there's less irritation and less expense in getting out payrolls, regular or king size, with simple McBee methods on the job.

Philip Morris, the tobacco people, had a real problem preparing weekly paychecks for 600 salesmen and 160 office workers. For one thing, the salesmen were scattered from one end of the country to the other. And don't forget Hawaii. Paychecks had to go out almost the minute expense accounts came in. And with so many widely dispersed salesmen, there were umpteen different deductions to worry about.

McBee Payroll Posters and Keysort checks enable four girls in accounting to handle Philip Morris' payroll in one day.

The Payroll Poster gives Philip Morris a complete record for each employee — from check to journal to employee's record card — *all in a single writing.*

Keysort checks, marginally punched for quick, accurate

sorting, speed up the reconciliation phase of Philip Morris' payroll work. "Batch" reconciliation of paychecks saves up to 85% in operational time.

The negligible investment required by the Payroll Poster and Keysort paychecks and the amazing capacity and efficiency of these simple payroll control methods recommend them to any firm, whatever the size of its payroll.

There's a McBee representative near you. He's trained to analyze your payroll set-up and advise you whether or not McBee can help you. Ask him to drop in. Or mail the coupon.

THE McBEE COMPANY

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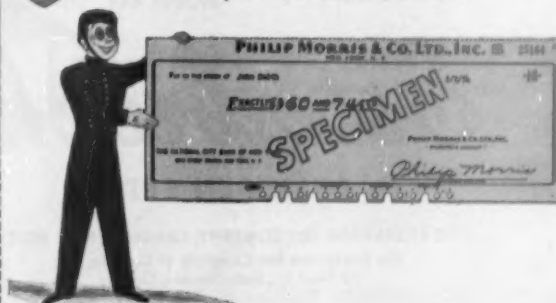
our ☐ PAYROLL ☐ CHECK RECONCILEMENT

FIRM _____

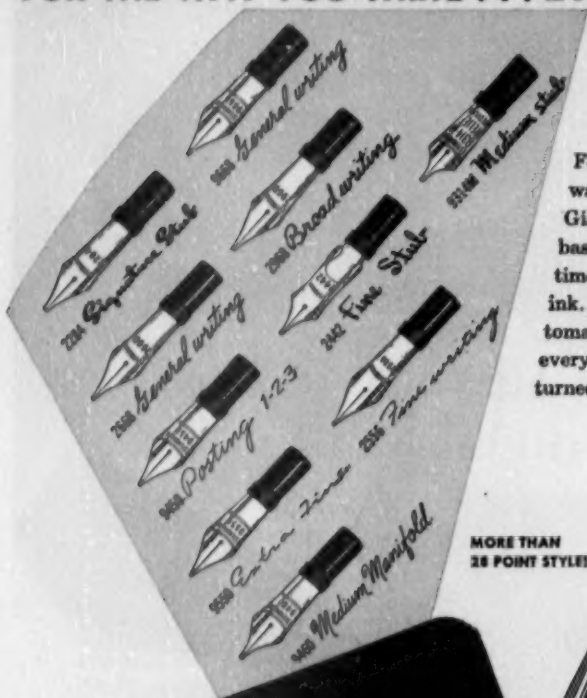
ADDRESS _____ CITY _____

ZONE _____ STATE _____

BY _____ NO. OF EMPLOYEES _____



Choose THE RIGHT POINT FOR THE WAY YOU WRITE ... BY NUMBER



For busy desks. Always ready to write. Giant ink-fountain in base needs ink only 4 times a year. Uses any ink. Fountain base automatically fills pen every time pen is returned to socket.

MORE THAN
28 POINT STYLES



Fountain base "ink-locked" against accidental spillage. Only the pen unlocks the ink.

Fountain base holds 40 times more ink than ordinary fountain pen. Won't leak. Won't flood. Easy to clean as a saucer.

Finger grip never touches ink. No chance for ink to touch you.

Point instantly interchangeable, instantly renewable in case of damage.



MODEL 444

TO SELECT OR
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ALL YOU DO



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THE ESTERBROOK
PEN COMPANY

congenial group than ... the Houston Cruise of 1954.

R. ESTACHY

SOUTHERN REPRESENTATIVE
FRENCH LINE
NEW ORLEANS, LA.

• While some Texans participated in the high jinks, there were others aboard whose deportment was the soul of conservatism.

Imported Steel

Dear Sir:

In your issue of Jan. 30, on page 144, was an article entitled Imports Worry Steel Men.

The volume of steel being imported into the U.S. has been and remains but a fraction of the annual steel exports of our country. ... Import prices are competitive with domestic prices only for certain types of steel, and ... imports provide competition for the domestic warehouses, a healthy factor for the public economy. Without imported steel, the price lists of the domestic warehouses would continue to present an undeviating similarity, regardless of which warehouse the customer approaches.

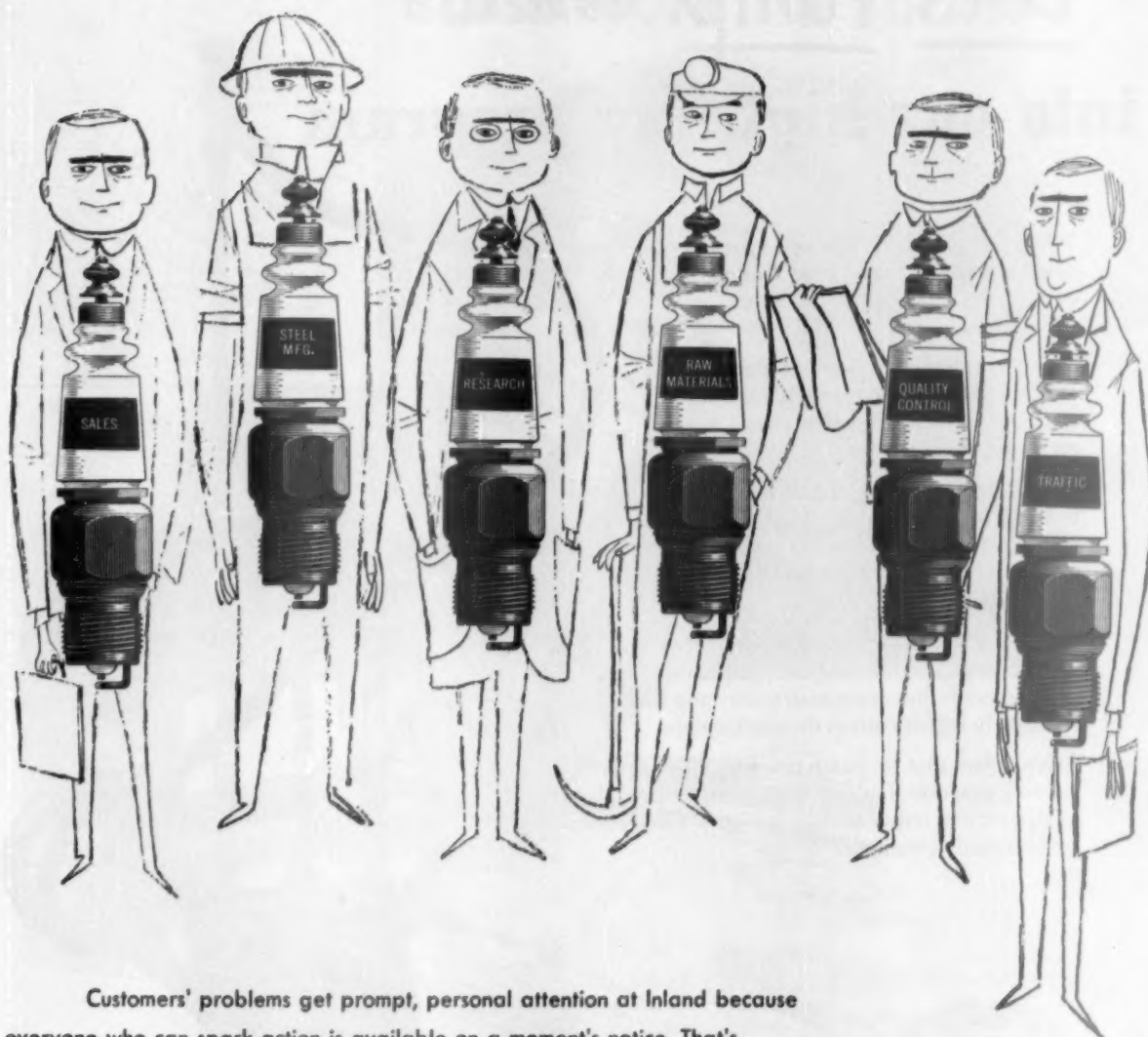
That the quality of steel is most satisfactory is best evidenced by the fact that many of the largest corporations of this country have been ... using imported steel for more than a generation. This is the same kind of steel that was used in the Simplon Tunnel, the Eiffel Tower, the skyscrapers and bridges of Europe ... and, in general, the same steel used so satisfactorily in the European economy.

... There are a number of importers of steel and distributors of imported steel who have established their reputation over a period of decades, and who have enjoyed the best of business reputations all that time. That there have been and will again be "cheaters" engaged in this trade is just as inevitable as the chronic existence of cheaters in ... all other lines of business. The fact remains that, among the members of the American Institute for Imported Steel, Inc., every firm has had long experience in the trade and is well known for living up to the terms of its agreements.

J. L. WILMOTTE

AMERICAN INSTITUTE FOR
IMPORTED STEEL, INC.,
NEW YORK, N. Y.

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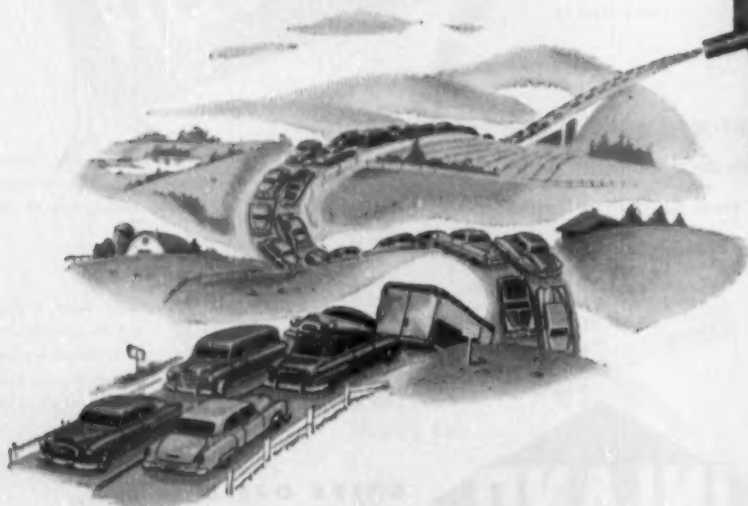
When this gas pump was new, you could roll your Stutz or your Winton over highways adequate for those traffic conditions.

Today it's different. Gasoline pumps and automobiles have kept pace with transportation progress. But many of our roads are now obsolete.

You've risked your neck on them . . . narrow, twisting, inadequate roads where driving is drudgery. Outdated roads that throttle traffic, spawn accidents, waste valuable time and fuel.

And you feel the pinch in your pocketbook, too. The high cost of transporting life's necessities over old roads that drain man-power and fuel is reflected in higher costs at the marketplace.

So it's urgent that we pump new life into our road-building program. Let's all work together through our local, state and national organizations. "Good roads are everybody's business!"



**The American Trucking Industry
THE A.T.A. FOUNDATION, INC.**

Advertisement sponsored by **TRAILMOBILE INC.**

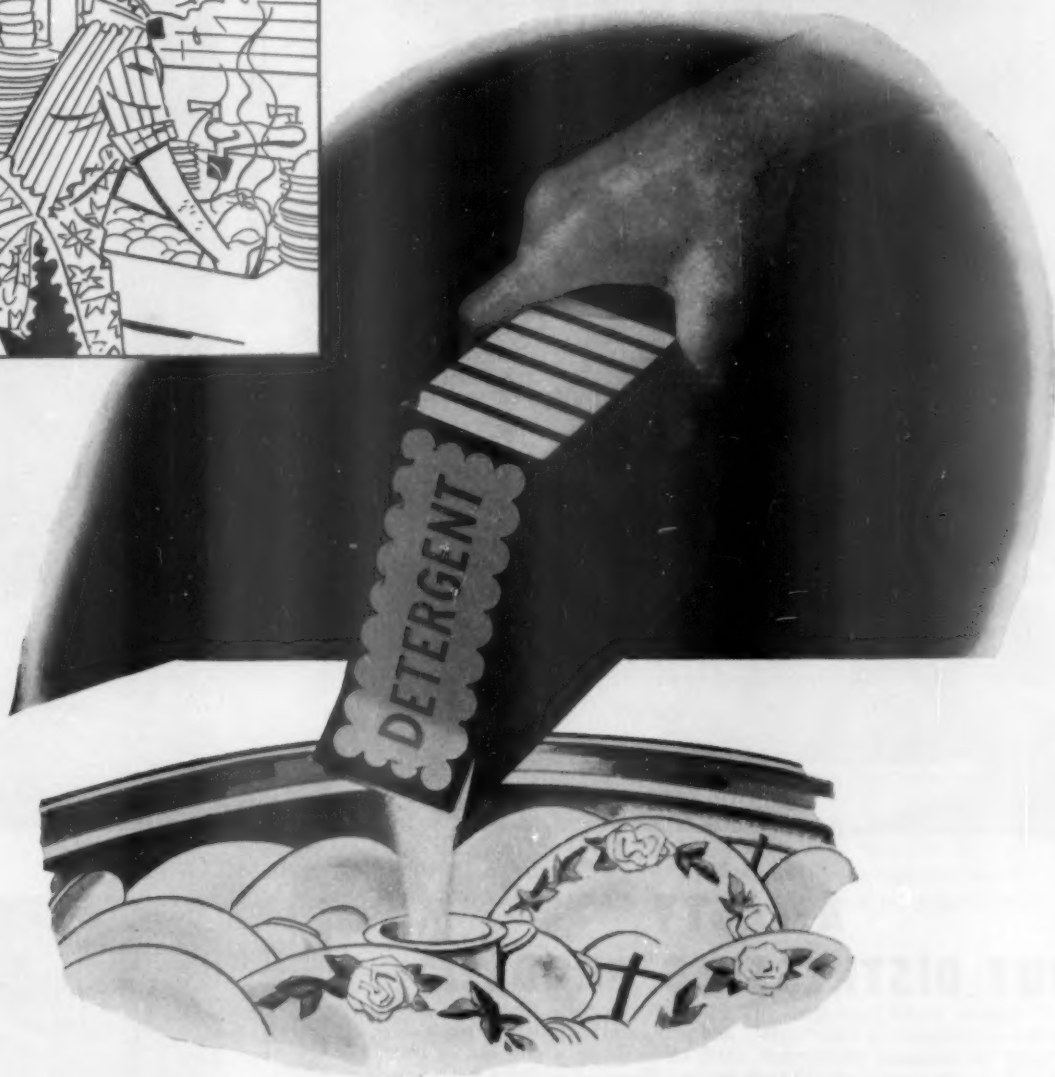
Trailer Sales and Service from Coast-to-Coast in the United States and Canada



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Ever get stuck with a stack of dirty dishes? Then you know why automatic dishwashers are making such a hit today. You may not know, though, that modern detergents had a big hand in making these kitchen toil-savers practical.

That's where Atlas comes in. Our Renex® detergent concentrates put high-powered cleaning action into dishwashing compounds. They clean without creating a tubful of suds that would make rinsing difficult. Renex products are favorites, too, with people who make home laundry compounds, sanitizers and other cleaning materials.

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 **ATLAS**
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A TASTY BUT DISTRESSING PROBLEM

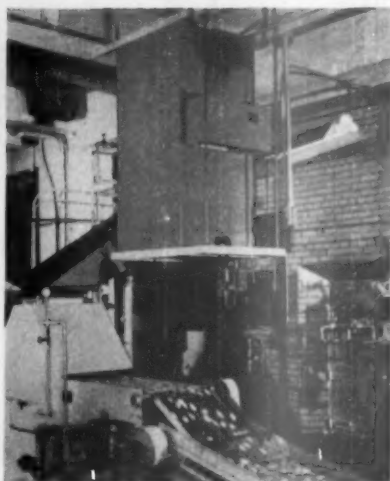
Felber Biscuit Company in the process of spraying hot coconut oil on their delicious Town House crackers, acquired an unwelcome oil mist problem. A fan exhaust system—installed to clear the air—wasted gallons of costly coconut oil and created a dangerous fire threat.

How to flavor these famous crackers without oil-painting the entire building? Felber Biscuit did it with an Oil Mist PRECIPITRON!

Excess oil mist is now drawn into a Westinghouse PRECIPITRON and out of the air completely. Result: mist, mess

and fire hazard have disappeared. Valuable coconut oil is now salvaged for re-use. Employee working conditions are greatly improved.

Perhaps Westinghouse PRECIPITRON can draw savings out of the air for *you*. There is a PRECIPITRON for every application for removing contaminants from the air. For an answer to *your* specific air cleaning problem . . . call your nearest Westinghouse-Sturtevant office today. Or write to Sturtevant Division, Westinghouse Electric Corporation, Hyde Park, Boston 36, Mass.



Westinghouse PRECIPITRON suspended directly over the hot coconut oil spray collects excess oil mist from the spraying operation. Clean air is returned to the room; valuable oil is reclaimed.

WESTINGHOUSE AIR HANDLING

----- YOU CAN BE SURE... IF IT'S **Westinghouse** -----

J-80332

BUSINESS OUTLOOK

BUSINESS WEEK

MAR. 13, 1954



Business depends, more and more, on consumer's spending attitudes.

There's been a decline of about \$6-billion, at an annual rate, in payrolls (BW—Mar. 6'54, p18). And this has had a twofold effect:

- Families whose incomes have been cut—whether by loss of jobs or loss of overtime—tend to spend more carefully.
- A lot of people—even those with incomes unchanged—hesitate before undertaking major outlays or going into debt.

January sales, seasonally adjusted, were 3% behind a year ago (page 25).

Preliminary reports from the Commerce Dept. show little improvement in February: Total sales, also seasonally adjusted, fell 5% behind last February.

But a Commerce spokesman says this 5% may exaggerate the dip. Unadjusted, actual dollar sales were only 3% behind last February.

By and large, sales of nondurables have held up better than durables in the first two months of this year.

Apparel is the only softgoods line that's worrisome. Apparel store sales have been running about 5% behind a year ago.

Durable sales, as a group, are about 10% behind 1953.

But some hardgoods have registered gains. Commerce reports appliance, radio, and TV sales up about 10% in January.

And Ward's Automotive Reports has just put a much cheerier tone on the auto sales picture. February new-car sales topped year-ago figures by about 30,000 units; and Ward's thinks that March may well hit a 6-million annual-rate clip.

Where hardgoods sales have lagged, price shading may have encouraged buyers to wait for still better terms.

Possibly they ended 1953 with needs pretty well filled. Or maybe they are a little pinched for cash and afraid to borrow.

—•—
You expect a reduction in consumer debt after every Christmas. People settle up for holiday purchases, bringing charge-account debt down particularly.

And they behaved as usual this year—they repaid \$400-million of the more than \$6½-billion they owed to stores.

The surprise, though, was a fairly major cut in installment debt.

These obligations, after reaching a record of \$21.8-billion in December, dropped more than \$360-million in January. That's the biggest drop for any January in the postwar period by quite a margin.

—•—
Pre-Easter sales will be scanned closely for clues to the consumer's frame of mind.

If style merchandise moves well, it will show that people aren't scared—that they may soon begin buying big-ticket items at something nearer 1953 rates.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

MAR. 13, 1954

What happens to retail sales in March could be misleading if you are trying to size up 1954 as a whole.

For one thing, consumers may well be waiting to see what Congress does to excise taxes.

For another, they were paying their last debts to Uncle Sam on their 1953 income—the biggest in history.

Moreover, comparisons of total sales for this March with a year ago will be tricky, especially for the unwary.

You have to allow for a later Easter this year, pushing the peak of holiday trade into April.

On the other hand, volume for the month will benefit from one more shopping day this year as against last. (With sales running about \$13½-billion per month, a \$500-million sales day will be felt.)

March sales last year were the biggest ever for the month. Even if this March should drop 5%, it would still be the second best.

—•—

Here's how the autos line up as they begin their spring push, according to Ward's Automotive Reports:

Ford still holds the lead in production—about 10,000 units ahead of Chevrolet.

Buick remains third. But there's one surprise—Pontiac has moved into fourth.

Plymouth, usually third, is in fifth place, with 66,184 units turned out through Mar. 6. Sixth-place Mercury was only 3,366 behind.

Ford is really bearing down on the accelerator this year. The three Ford lines accounted for 21% of U. S. passenger-car production in the first two months of 1953. In January and February this year Ford turned out about one-third of the total.

General Motors, with 45% last year, is now up to 49%. Chrysler had 23% last year, 13% this year. And the independents have slipped from 11% to 5%.

With operations scheduled at 69% of capacity this week, steelmakers are probably not too happy about Ford's upsurge. For slightly over 50% of Ford's steel needs are self-supplied.

—•—

If employment and earnings are one of your favorite business indicators, here are the latest figures:

- Nonfarm employment (as of February) is down 900,000 from a year ago.

- Nonfarm employment slipped 300,000 between mid-January and mid-February.

- Average hours worked in manufacturing were 39.5 this February as against 40.9 last year. Average weekly earnings were \$70.71 vs. \$71.17.

But before you swallow your gum, remember this: We don't have current figures on disposable income; and there could well be a continuing improvement on this front because of tax cuts.

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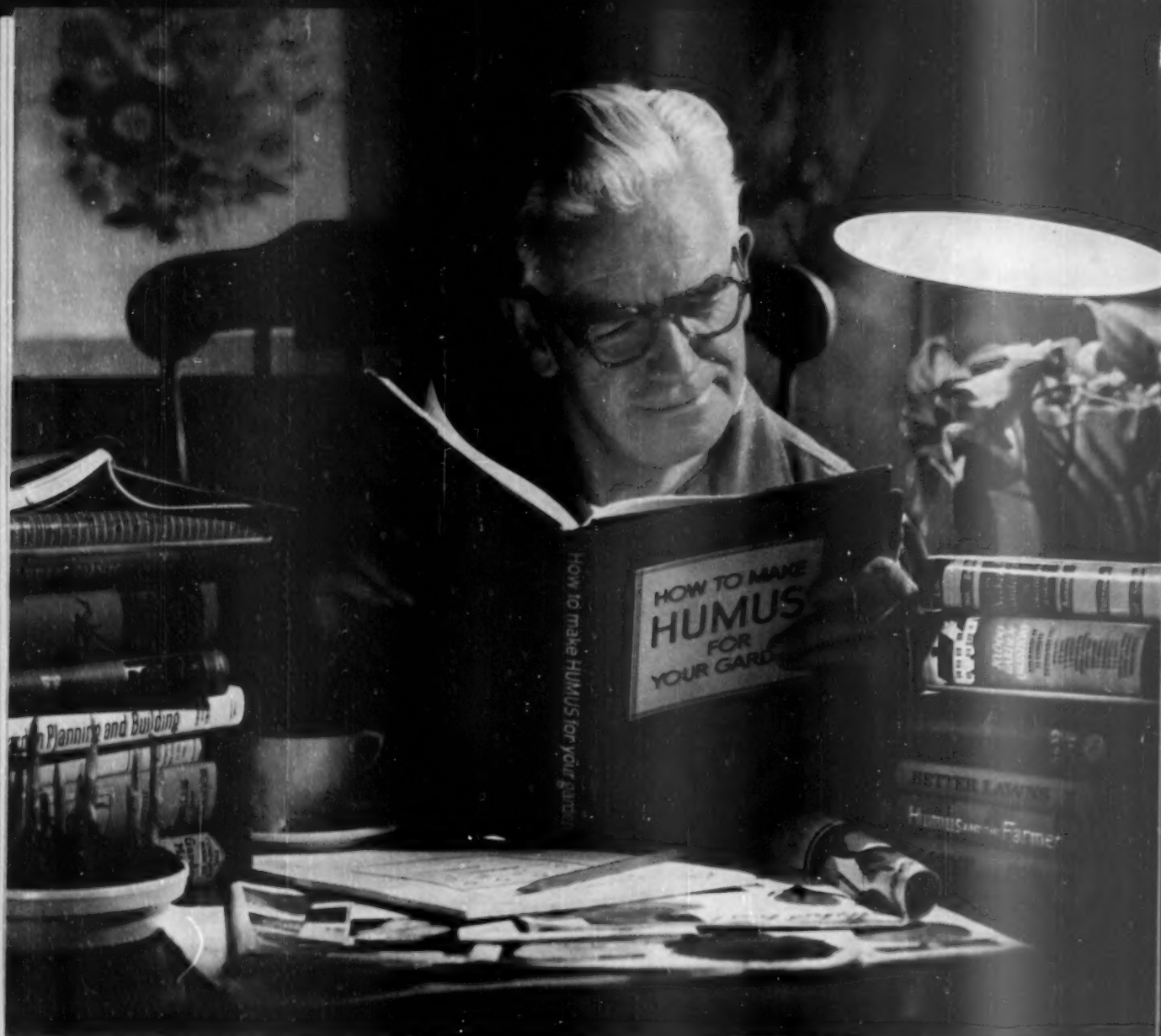
- | | |
|----------------------------------|------------------------------------|
| In New York | In Chicago |
| THE WALDORF-ASTORIA | THE CONRAD HILTON |
| THE PLAZA | THE PALMER HOUSE |
| THE ROOSEVELT | In Los Angeles |
| THE NEW YORKER | THE TOWN HOUSE |
| In Washington, D. C. | In Dayton, Ohio |
| THE MAYFLOWER | THE DAYTON BILTMORE |
| In St. Louis, Mo. | In Albuquerque, New Mexico |
| THE JEFFERSON | THE HILTON HOTEL |
| In Columbus, Ohio | In San Juan, Puerto Rico |
| THE DESHLER HILTON | THE CARIBE HILTON |
| In Fort Worth and El Paso, Texas | In Madrid, Spain |
| THE HILTON HOTEL | THE CASTELLANA HILTON |
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Photograph by Vilis

Here's GOOD NEWS for gardeners!

Millions of home gardeners have a pleasant surprise in store for them this year. For the first time "Cyanamid," agriculture's most useful form of nitrogen, is available for home garden use.

Lawn and Garden Cyanamid, as this product is known, offers many advantages to the home gardener. It enables him to turn spaded-in plant refuse into humus in the soil...build humus in a compost pile...kill weed seeds in the soil for new lawns...or repair old lawns. At the same time, Cyanamid supplies long-lasting nitrogen and soil-sweetening lime...both essential to sturdy and season-long plant growth. In fact, this is the way commercial growers have achieved outstanding results for many years with flowers, vegetables and turf. Cyanamid is now available in 10, 25 and 50-pound bags and will be on sale at garden supply outlets as rapidly as distribution can be completed.

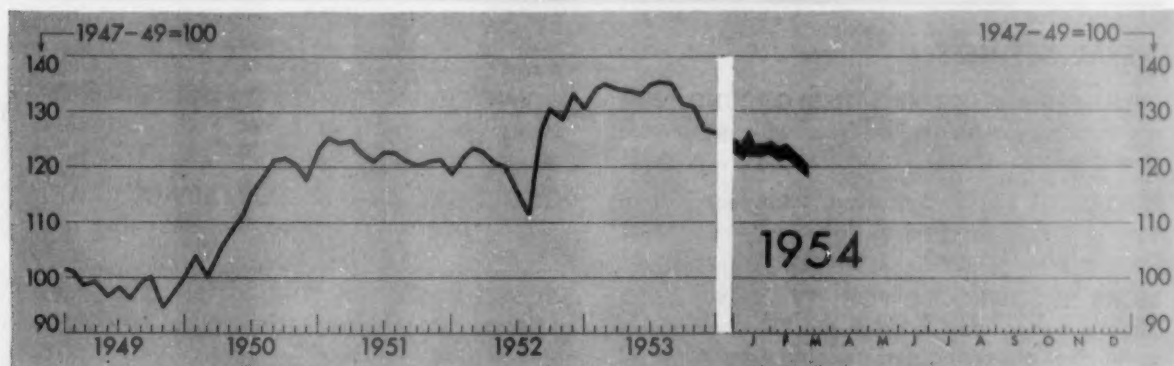
Lawn and Garden Cyanamid is a granular form of calcium cyanamide, the astonishingly versatile, basic material from which American Cyanamid Company has developed many chemicals for agriculture, industry and the home.



AMERICAN *Cyanamid* COMPANY

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

FIGURES OF THE WEEK



Business Week Index (above) *120.5 †121.3 123.2 133.6 91.6

PRODUCTION

Steel ingot production (thousands of tons).....	1,642	†1,686	1,774	2,284	1,281
Production of automobiles and trucks.....	138,643	†145,980	138,987	158,825	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$36,048	\$33,933	\$30,658	\$43,767	\$17,083
Electric power output (millions of kilowatt-hours).....	8,586	8,396	8,674	8,173	4,238
Crude oil and condensate production (daily av., thousands of bbls.).....	6,433	6,303	6,271	6,440	4,751
Bituminous coal production (daily average, thousands of tons).....	1,126	†1,208	1,401	1,435	1,745
Paperboard production (thousands of tons).....	223,579	228,258	228,571	251,323	167,269

TRADE

Carloadings: manufactures, misc., and L.c.l. (daily av., thousands of cars).....	67	67	65	76	82
Carloadings: raw materials (daily av., thousands of cars).....	36	36	39	41	53
Department store sales (change from same week of preceding year).....	-3%	†+1%	-2%	+9%	+30%
Business failures (Dun and Bradstreet, number).....	223	204	238	180	22

PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100).....	426.9	426.3	420.2	418.7	311.9
Industrial raw materials, daily index (U. S. BLS, 1947-49 = 100).....	81.2	80.9	82.3	92.4	†173.2
Foodstuffs, daily index (U. S. BLS, 1947-49 = 100).....	99.5	99.1	97.4	86.4	†175.4
Print cloth (spot and nearby, yd.).....	19.9¢	19.7¢	19.8¢	23.4¢	17.5¢
Finished steel, index (U. S. BLS, 1947-49 = 100).....	140.9	140.9	141.3	130.6	†176.4
Scrap steel composite (Iron Age, ton).....	\$23.50	\$23.83	\$26.67	\$44.08	\$20.27
Copper (electrolytic, Connecticut Valley, E&MJ, lb.).....	29.985¢	29.985¢	29.975¢	29.630¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$2.43	\$2.43	\$2.36	\$2.39	\$1.97
Cotton, daily price (middling, ten designated markets, lb.).....	34.21¢	34.12¢	33.96¢	33.38¢	30.56¢
Wool tops (Boston, lb.).....	\$2.12	#	\$2.12	\$2.10	\$1.51

FINANCE

90 stocks, price index (Standard & Poor's).....	210.4	208.0	208.1	205.7	135.7
Medium grade corporate bond yield (Baa issues, Moody's).....	3.55%	3.56%	3.63%	3.55%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	2%	2%	2%	2 1/8%	3 1/8%

BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	53,913	54,038	55,588	53,876	†145,820
Total loans and investments, reporting member banks.....	79,534	79,744	80,660	77,534	†172,036
Commercial and agricultural loans, reporting member banks.....	22,407	22,446	22,638	22,922	†19,299
U. S. gov't guaranteed obligations held, reporting member banks.....	32,292	32,476	32,989	31,276	†149,879
Total federal reserve credit outstanding.....	25,689	25,312	25,860	25,742	23,883

MONTHLY FIGURES OF THE WEEK

MONTHLY FIGURES OF THE WEEK		Latest Month	Preceding Month	Year Ago	1946 Average
Average weekly earnings in manufacturing	February	\$70.71	\$70.92	\$71.17	\$43.82
Manufacturers' inventories (seasonally adjusted, in millions)	January	\$46,412	\$46,722	\$44,330	\$21,238
Wholesalers' inventories (seasonally adjusted, in millions)	January	\$11,757	\$11,867	\$11,282	\$5,489
Retailers' inventories (seasonally adjusted, in millions)	January	\$22,572	\$22,661	\$21,518	\$9,791
Consumer credit outstanding (in millions)	January	\$28,125	\$28,896	\$25,674	\$6,704
Installment credit outstanding (in millions)	January	\$21,444	\$21,807	\$18,851	\$3,174

* Preliminary, week ended March 6, 1954.

† Revised.

‡ Estimate.

Insufficient trading to establish a price.

§ Date for "Latest Week" on each series on request.

in BUSINESS this WEEK . . .

GENERAL BUSINESS:

RETAILERS ARE HOLDING THEIR GROUND. Sales are running just under last year with inventories at rock-bottom levels. . . . p. 25

PENTAGON SHIFT. Anderson, taking over from Kyes, will find the post of Assistant Secretary of Defense has changed. . . . p. 26

MORE ELBOWROOM FOR TV NEWSCASTS. There's a long way to go in the TV news field—and CBS is off, with a new morning show. . . . p. 27

SO FAR, THE PATTERN IS ENCOURAGING. Inventory readjustment still looks healthy, with sales running ahead of production. . . . p. 28

POLLING THE VOTERS FOR ADVICE — AND VOTES. Congressmen hit on a potent public relations tool. . . . p. 30

ATOMIC POWER IN FIVE YEARS. AEC's new program brings cheap commercial power in sight. . . . p. 32

BUSINESS ABROAD:

GERMAN CARTELS TRY FOR A COMEBACK. The Allies haven't squelched them and Germany won't put a strong law on its books. p. 148

JAPANESE PLANE MAKERS REVIVING UP. Lockheed licenses Kawasaki to make jet fighters. . . . p. 154

HELP FOR U.S. EXPORTERS? Some American manufacturers claim they sorely need it to compete. . . . p. 157

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of new corporate securities offered slipped last year. . . . p. 71

GOVERNMENT:

NEW FRIEND for business is Business & Defense Services Administration. . . . p. 196

LABOR:

CRAFT UNIONS GET A HUNTING LICENSE. NLRB gives them the green light to set up enclaves in industrial plants. . . . p. 166

SQUEEZE PLAY IN PITTSBURGH. In a dispute involving some of the city's big stores, the government has been accused both of helping break the strike and subsidizing it. . . . p. 168

IT DEPENDS ON WHERE YOU ARE. There's a wide variation in the proportion of unemployment compensation seekers turned down in different states. . . . p. 170

PENSION PLANS for workers in small companies spread. . . . p. 172

MANAGEMENT:

NEW WRITE-OFF RULES WILL FORCE NEW DECISIONS. What the revised tax rules will mean to management. . . . p. 96

THE DRUNK: HE'S MANAGEMENT'S BABY. Some companies have cured the problem drinker and more may

find they can't ignore him. . . . p. 103

NORTHWEST SQUALL. Harold Harris quits airline presidency after one year. . . . p. 110

MARKETING:

FOR RENT: JUST ABOUT EVERYTHING. Emerson's move to rent color TV sets is in step with fast-broadening rental business. . . . p. 43

HOW RESEARCH SELLS PURINA FEED TO FARMERS. Ralston Purina's research farm is its answer to customers who believe only what they see. . . . p. 48

WAR ON AUTO BOOTLEGGING. The National Automobile Dealers Assn. is pressing to change the anti-trust laws that keep manufacturers from clamping down. . . . p. 52

RX FOR DEPRESSION PSYCHOSIS. Advertising Council campaign will plug the economy's strength. . . . p. 58

THE MARKETS:

TWO ROADS FOR COMMODITIES. On prices, foodstuffs took the high one, industrial raw materials the low. . . . p. 176

NAMES & FACES:

HE SEES THE SUNNY SIDE OF THE FUTURE. Economist Johnson says: 1954 can top '53 by 5%. . . . p. 124

PRODUCTION:

HE MAKES TINKERING PAY. Arthur Collins parlay a radio hobby into an \$80-million business. . . . p. 74

LEAD BATTERY DEFENDS ITS TITLE. Nickel-cadmium and atomic batteries won't dethrone it in a hurry. . . . p. 80

SUB FOR STAINLESS. New alloy that skips scarce metals can do stainless steel's job in jet planes. . . . p. 84

NEW PRODUCTS. p. 92

COMMODITIES:

TOO MUCH FOR THE JUICE PROCESSORS. The orange crop this season caught them long on expensive supplies bought earlier. . . . p. 186

FACTORY JOBS FOR SILVER. Nowadays more flows to industry than bolsters gracious living. . . . p. 192

COMPANIES:

A NEW PERSONALITY FOR RICE. Converted Rice, Inc., is selling its product as a specialty food. . . . p. 136

NEW COMBINATION IN STEEL. Crucible Steel Co. goes partners with National Research to put vacuum-melted steel across. . . . p. 142

ECONOMICS:

U.S. STATISTICS: A HOLLOW SHELL? The edifice of government figures looks weak and shaking. . . . p. 113

FINANCE:

HOW WALL STREET SWINGS A HOUSING BOND ISSUE. It operates like a miniature stock market. . . . p. 60

THE TREASURY SPRINGS A SURPRISE. Instead of a long-term issue, the government's new offering matures in June. . . . p. 68

THE TREND IS STILL DOWN. Crop

LOOK WHAT RUBBER PRODUCTS MADE WITH NEOPRENE ARE DOING



OVER 47 MILES OF GROUNDING WIRE, covered with durable neoprene jacketing, link the building columns of this plant to steel grounding rods. Neoprene provides sufficient insulation to prevent galvanic action between the wire and buried steel . . . and resists any deterioration due to sunlight, heat and exposure to soil acids.



TRIM, TOUGH SAFETY SHOES are smartly styled right down to rugged neoprene-cork soles. And those soles *stay* comfortable, flexible and resilient, resist attack from heat, grease, oils and chemicals.



SPRING-LOADED NEOPRENE DIAPHRAGM operates new delayed-action switch which keeps headlights on for 1½ minutes before they're turned off automatically. Neoprene has the flexibility needed for this essential part and resists deterioration from oil, grease, abrasion and aging.

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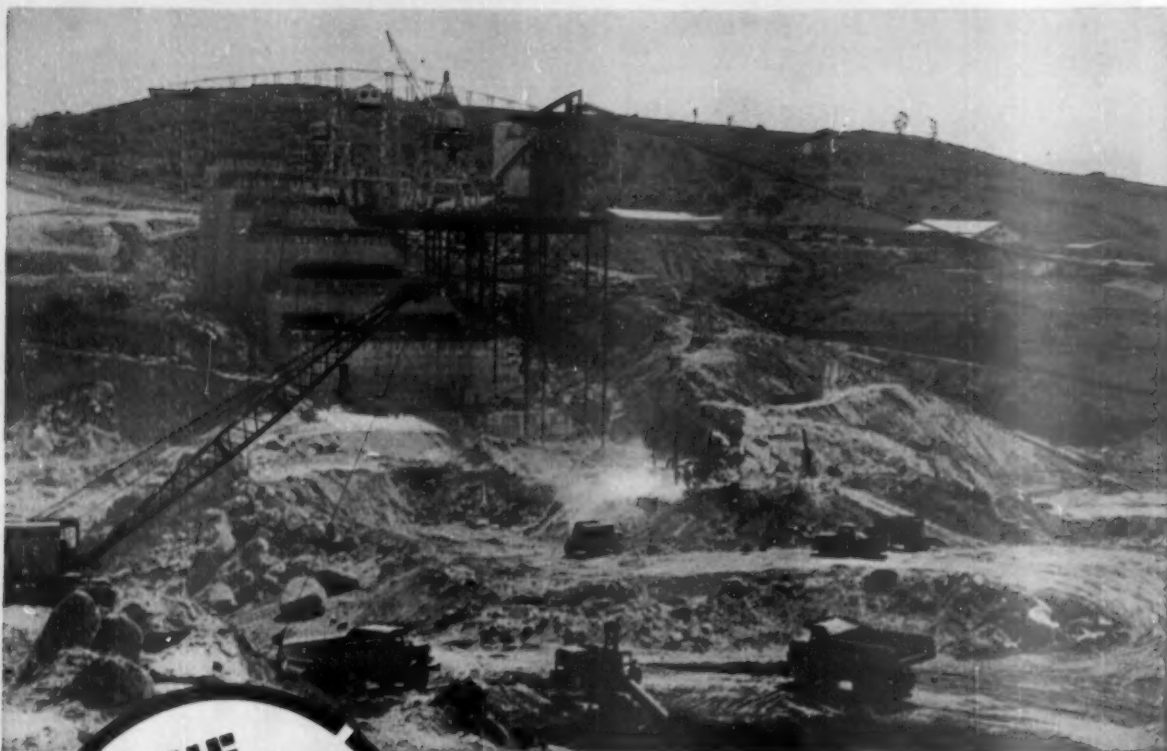
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Retailers Are Holding Their Ground

- Sales are running pretty level, though still a touch below last year.
- The real trouble is in hardgoods. Soft stuff is doing just fine.
- And the merchants have their own inventories at rock bottom levels—and are keeping them there.

Retail sales—once again the key to the business outlook—are running level, slightly behind last year.

A BUSINESS WEEK survey across the nation finds retailers working harder, promoting harder, holding inventories tight—and selling almost as much as in the boom months of last year. How much they're falling behind depends on what statistician you use. But the difference is something like 3%. On this the not entirely reliable Commerce Dept. report on February sales is confirmed by the BW survey.

• **Trends**—Behind this broad picture, here are some of the major trends of the early months of 1954:

• **Hardgoods**—particularly autos—are responsible for almost all the drop in retail sales. The flash report puts dollar value of car sales about 10% down from last February. New-car sales weren't too far behind February 1953, but retail price-cutting and used-car troubles pulled the gross down hard. Appliances, though not so badly off, are also down.

• As a result, department stores, which are heavily weighted on the side of softgoods and carry a diversified line of merchandise, are doing a little better than retailing as a whole.

• **Geographically**, most of the sales dip is now coming from the industrial centers, where workers have been laid off. The dip in rural buying made its impact a year ago.

• **Inventories** are down (page 28), and retailers are reordering on a hand-to-mouth basis. A few weeks ago it looked as though retailers, worried about empty shelves, were beginning to buy more heavily (BW—Feb. 6 '54, p. 42). But somehow the movement petered out.

• It is generally agreed that con-

sumers still have money in the bank and that those merchants who are aggressive get the business.

• **Regions**—These are the national patterns of the past couple of months. When you examine the situation from a regional standpoint, however, you get a picture that varies quite sharply from city to city:

In the Detroit area, where sales have been running 8% behind for the year so far, the final week in February was down badly—by 12%. In San Francisco, on the other hand, after a slow start for the year, merchants said they noticed a quickening of the pace at the end of last month.

Atlanta and Boston are bullish; merchants say business is even better than a year ago. They poohpooh all gloomy talk. Neither New York nor Chicago seems too dissatisfied with sales thus far. Akron says appliance sales are off as much as 20% from last year and is pessimistic in the face of the rubber industry's layoffs and reduced hours.

Portland, Ore., reports sales in February were down about 8% from 1953 levels. Arizona's retail sales were off even more—10% to 15%—in February, but observers have noted an upswing in the past two weeks. Syracuse, N. Y., however, had a poor January and February and dipped even further in the first days of March. Houston calls things "spotty," thinks there has been a slight upturn recently.

• **Buying**—But no matter whether he professes cheer or gloom, there is one area where every merchant sees eye to eye with every other merchant: inventory and buying policy. There was great optimism in Atlanta last week—but nobody was stocking up. In Atlanta and Akron, everyone is trying to keep inventories at or below last year's levels.

Everyone is ordering on strictly a short-range, replacement basis.

In different language, merchants are saying much the same thing about the state of their inventories:

"Quite a bit off" (West Coast specialty store). "Par" (Boston furniture store). "Beautiful shape" (Texas department store). "Off 5% (San Francisco hardware store). "Lower than last year" (department store chain). "Close to belt" (St. Louis department store). "Some 5% to 20% under" (Kansas City appliance store).

And here are the words merchants use to describe their policy: "Cautious . . . conservative . . . hand-to-mouth . . . as needed . . . not ordering ahead . . . closer."

Merchants simply know that they can get the goods immediately when they need them. As a result, the distributor and the manufacturer are now holding the inventory for the merchant—a situation that has become one of the accepted facts of business life at midcentury.

• **Appliances**—What's selling and what isn't selling again vary geographically to some extent. In San Francisco, for instance, appliances seem to be doing well—while clothing is down. But that isn't the national pattern, which goes something like this:

Almost everywhere appliances—particularly the big-ticket items—are down. How much down can vary from a little amount, to 10% for the month of February in Chicago, to even 30% in some places. There were some outstandingly bright spots here and there. Two such were Westinghouse and General Electric distributors, riding high on new models and aggressive selling methods.

Only standout among appliances as a whole is laundry equipment—both automatic washers and driers, which seem to be doing well almost everywhere. One merchant, hard-pressed to explain this while other appliance sales are lagging, fell back on an old argument: In times of recession, he said, people stop sending their clothes to the professional laundries and buy home washers instead.

Television sets seem to vary all over the lot, from better than last year in Syracuse to poorly in Kansas City. It

depends partly on whether the area is newly opened up to TV—and, if it isn't, on how people feel about color television.

• **Strength**—One remarkably strong field of hardgoods is the do-it-yourself market—power tools, garden equipment, paint, and the like. Says a Pittsburgh hardware dealer: "These home repair boys and game-room builders are keeping our business hopping." Even in Detroit, where sales are down over-all, do-it-yourself items are humming.

As for furniture, in general it is doing better than appliances. You can find furniture stores running ahead of last year. W. & J. Sloane, New York's famous carriage-trade store, is one example. On the whole, furniture is probably running a few percentage points behind last year.

• **Softgoods**—Food store sales are hitting just about the same pace as last year. Food buying patterns change very slowly; there is no evidence of any change going on here.

In the rest of the softgoods area, there are variations. But things are much more cheerful than in appliances. The gloomiest reports center on ready-to-wear clothing. Some of this gloom is explained by the mild winter weather of some weeks ago, which depressed coat sales. In part, some of the blame for lagging sales now falls on the lateness of Easter this year. The Easter sales season isn't yet under way.

The strength in softgoods lies in children's clothes, particularly. There's also strength in domestics, accessories, and a multitude of other items falling under the heading.

• **The Stores**—Helps to explain why some kinds of merchandisers are doing better than others.

Department stores, thanks to their accent on softgoods, are doing well. But the big mail-order houses that do a large hardgoods business are down sharply. Sears, Roebuck was off 14.9% in February from the year before; Montgomery Ward was off 10.6%; Spiegel's was off between 11% and 13%. These figures followed sales dips of like severity the month before. The reason seems fairly clear when you note that Alden's, which concentrates heavily on apparel, was up 5% over the year before—and that another major retailing chain, dealing only in softgoods, was off only about 14%.

• **Town and Country**—For a while it looked as though rural sales might be playing a part in the low figures for the mail-order chains. Where there is drought or poor crops, of course, the effects show up in retail sales. But in general, the over-all drop in farm income over the past year or two did not play a part in the difference between this year's and last's national retail figures.

One of the nation's major retailing chains finds that the areas where sales are off most are the big industrial areas hit by lay-offs. In fact, the chain detects a slight upturn in rural sales. An Indiana appliance retailer agrees with this. "The farmers are loosening up again," he reports.

• **Incomes**—In the urban areas, it appears that the quality stores are going better than the ones selling at a lower price level. Notes a Pittsburgh observer: "The well-heeled are still well-heeled, but the lower-income people are hanging onto their money." And Cincinnati says: "Merchants catering to the middle- and higher-income groups are happier than those aiming at lower-income families."

There is some evidence, however, that the people in the lower-income groups are downgrading their purchases. This could account for the fact that basement shops are reported by some department store chains to be running ahead of storewide sales. And the situation gives hope to a large variety store chain: "During hard times we pick up a whole new set of customers. They walk past the big price tag stores right through our doors."

• **Overtime**—In Detroit, an observer makes this point about the new spending habits:

"One important factor in this whole situation is the great decline in overtime employment. Workers are beginning to realize that the overtime pay they collected for so long is not actually part of their regular income. And they now have time to devote to their shopping expeditions. They are not just doling out money for the first item they spot that fits their needs, but are shopping around for the best value."

• **Selling**—Merchants are doing their best to nab these customers, who still have money to spend—if not so much as formerly.

This has spelled a return to selling. A Houston hardware chain gained 5% in sales over last year by staying open every evening and Sunday mornings. A Philadelphia appliance dealer has men pushing doorbells, two girls soliciting business by phone. A Cincinnati furniture company is offering a used car free with a \$995 roomful of furniture. The May Co.'s St. Louis stores have been running sales with bargains from 20% to 40% off. A retail salesman in a Midwest appliance store sold 35 driers in less than a month.

Everyone is agreed that the store that really hustles will get the business. A Greensboro (N. C.) businessman sums up the attitude when he says:

"It depends on the dealer. One is selling washing machines madly, the other says washing machines are lousy. Individual push seems to make the difference."

Pentagon Shift

Anderson, taking over from Kyes, will find the post of Assistant Secretary of Defense has changed.

The Deputy Secretary of Defense is a man who holds almost as much power—some top brass say he has more—than the Secretary himself.

This was the feeling of top officers this week as they said goodbye to "jolly" Roger Kyes, former GM executive who came to Washington with his civilian boss, Charles E. Wilson.

The Secretary's job in the Pentagon actually is made for a politician—a man who steps in when necessary to tack down a policy or shake up a subordinate, but whose main job is keeping in touch with his equals—the top men in industry, Congress, and the Administration. The Deputy Secretary is the man who really makes the department run—or not run—and this is where Kyes really functioned.

• **No Friends**—Kyes came in to be Wilson's "hatchet man," to clean out the Democratic politicians if need be, to reorganize the department so the Secretary would have direct control, and to rap the knuckles of the uniformed men as the occasion arose.

Kyes took over with the attitude that he didn't have any friends to bring in with him and didn't expect to make any while he was at the Pentagon—and that people would not long stand in his way, once he had made up his mind. Most neutral observers—and some of the bruised inhabitants of the Pentagon's upper strata—agree that by and large Kyes lived up to his advance billing. But they also agree he did a job that needed doing, and did it well.

• **New Man**—The new Deputy Secretary, former Navy Secretary Robert B. Anderson, 43, steps into a job that will be quite different from the one Kyes faced: The big budget-cutting, reorganization days are over. From here on out he will be able to spend much of his time administering a Pentagon and military organization that will stay about as it is today.

Prior to his appointment as Navy Secretary, Anderson had been general manager of the Waggoner estate—a tremendous cattle and oil empire in Texas covering several counties and including a great many entire towns all dominated by the estate management.

Anderson was admittedly a landlubber, but he quickly captured the fancy of naval officers by his efficiency and grasp of naval problems. In his new spot as Deputy Secretary of Defense, his flare for management will be put to good use.



THE MORNING SHOW, CBS's newest, with Walter Cronkite (extreme right) and Charles Collingwood (seated, left) allows . . .

More Elbowroom for TV Newscasts

People who make television a part of their breakfast will get a new morsel—an electronic one—to taste next week. Offering: a brand-new news-entertainment program, called The Morning Show, which Columbia Broadcasting System will start serving up on Monday over a network of about 60 stations.

CBS's show is a mixture of new and not-so-new ingredients. Its over-all flavor, however, is familiar. For The Morning Show is CBS's answer to National Broadcasting Co.'s morning show, which is called Today. And any similarity between the two is strictly intentional.

Where NBC has the doctorly Dave Garroway presiding over its Monday-through-Friday wake-up doings, CBS will have the equally relaxed Walter Cronkite to prod bleary-eyed viewers. Both nudge their audiences with frequent time checks, brief them on the weather, feed them an occasional song, and tell them what and why they ought to buy. Between these periodic interruptions are the major elements of the shows—news summaries, special news features, interviews, and plain entertainment. Garroway spoofs with J. Fred Muggs, a somewhat blasé chimpanzee; Cronkite turns the set over to the Baird puppets who play records and mime the songs. All is pleasant and profitable.

• **Lush Field**—CBS's reason for following NBC's lead in a morning show is, of course, primarily commercial. After two years and a painfully slow start, Today is now littered with sponsors and

comfortably soaked in black ink. The trade paper Variety figures that the program's scheme of "magazine" sponsorship—in which companies buy time "insertions" for their plugs, rather than sponsoring specific portions of the show—brought in better than \$5-million last year. Against this, the show cost an estimated \$24,000 a week to produce.

CBS, naturally enough, wants to get its spoon into the same pot. It, too, is after the "participating" sponsor. Its system will be to sell five 1-min. participations in each 25-min. segment, followed by a 5-min. cutaway for local sponsors. At midweek the show had only one national sponsor.

But money isn't the whole of it in Columbia's decision to launch a morning news-type show.

• **Better Coverage**—In the past year, the television industry has put more effort into news coverage than at any time since video crowded its way into the American living room. In doing so, it has had two targets, apart from the commercial one: (1) to increase the amount of news coverage and improve the techniques of gathering it; (2) to work out program formats that make better use of TV's great potential for presenting news.

Television newscasting, the industry likes to say, is "still in the crawling stage." The accuracy of the cliché is debatable. But it does sum up what the child has already accomplished—and serves as an excuse for what he hasn't.

• **Speedup**—There is no question but that TV news has come a long way in the past few years—from a technical

standpoint especially. The lapse between the time when news happens and when it shows up on the network has been trimmed, in some cases, to a matter of minutes. CBS can film a story up to 6 o'clock in the New York area, process it, edit it, and have it on the Douglas Edwards network show at 7:30 p.m. By using "hot" developers, the time can be cut even more.

The film is better, and there is more of it. It's a rare network newscast today that doesn't have movie coverage—usually with sound—of five or six stories that have broken in the last 12 hours. A dramatic piece of news—like last week's shooting of five members of the House of Representatives—will rate combined film and "live" coverage. Both CBS and NBC moved TV cameras inside the House to give their evening news audiences a direct look at where the shots landed. Then they switched to film to pick up the story as ambulances screeched their way onto Capitol Hill, moments after the shooting.

The day when a network newscaster simply read bulletins and flashed a few pictures has definitely passed.

• **Is It Good Enough?**—It hasn't passed, though, without a good deal of energy and money spending on the part of the industry. And this raises the issue: Has the industry turned out a first-rate news product?

To gather newscasts and write the scripts for its two network shows (Garroway and the 15-min. evening Camel News Caravan) and the news programs of the network-owned local stations

probably costs NBC upward of \$2-million a year. CBS, which didn't set up a full-scale news department until last May—more than seven years after NBC—possibly has a smaller budget, but not by much. Its operation, like NBC's, is concentrated in the East; about 100 employees—editors, writers, assignment men, photographers, contact men, and technicians—are in New York; another 21 are in Washington. Key cities, like Chicago, Los Angeles, London, Frankfurt, and Tokyo, are staffed with two- or three-man bureaus. Covering the rest of the map are about 200 camera correspondents, or "stringers," who work part time.

On the average, this crew will turn out between 15 and 30 film stories a day to New York's order. The cream of these winds up on the nightly network show, and in slightly different form on the local news shots.

• **Orchids and Brickbats**—The only trouble is that the cream has often been sour, at least to the critics' taste.

Some of television's news coverage has won praise, hands down. Its reporting of the political conventions in 1952 was a first-rate job. The words have been kind for other "special events" coverage, too—the inauguration of President Eisenhower, for instance (but not the coronation of Elizabeth, which had a heavy seasoning of commercials).

And there has been applause for many of the weekly news-type programs. Edward R. Murrow's *See It Now* (BW—Dec. 19'53, p115) has often jumped into areas where TV normally fears to tread and, as a result, has produced some first-rank original reporting. Shows like *Meet the Press*, *Man of the Week*, and *Junior Press Conference* often make news themselves.

Where the brickbats have fallen has been on daily news coverage—the programs that are the direct responsibility of TV's sprawling news-newsfilm operation. What lies behind it?

• **Trade Opinion**—This is radio-TV editor Jack Gould writing in the *New York Times*: "For many months now both the CBS and NBC major news programs have been deteriorating badly . . . the emphasis has been on show business, not journalism."

This is Eric Sevareid, a commentator who is soon to have a weekly CBS-TV show: "I feel terribly dissatisfied with television news programs . . . [it] is a matter of retrogression—a going back to the picture page and newsreels."

• **More Elbowroom**—Many in TV news itself will agree privately with the critics. Others will go along publicly. John Daly, who heads American Broadcasting Co.'s TV news operation and who does its nightly newscast, agrees that putting the emphasis on the picture is wrong. "If a picture helps, use it," he says. "But the important thing

is the word—the reporting of the story and what's behind it."

• **Junking Old Format**—This mood of self-criticism, however, isn't nearly so noticeable at NBC and CBS—at least for the record.

Still the new TV news programs—CBS's *Morning Show* and the others on the planning boards—all are veering away from the summary format, and its limitations on coverage.

The reasons for this are probably more commercial than journalistic. Nevertheless, news shows are getting more room to move around in.

And room is important. Today, for instance, has had the space to develop some truly worthwhile news features. Last year it sent a cameraman and reporter to Indo-China. The result: some excellent film coverage of the war. Last month it went to Brazil, a trip that pro-



THE INVENTORY RECESSION:

So Far, the Pattern

It isn't easy to draw general conclusions from the inventory figures charted above. But it's worth the trouble to work them out—because the chances are that these figures contain the tipoff on where the current recession is headed and when it will end.

For almost a year now, economists have agreed that the U.S. was undergoing what they called an "inventory recession." But there hasn't been much agreement on just what this means.

• **What Kind?**—Actually, there are two kinds of inventory recession.

In one, stocks of goods get too high. Manufacturers, wholesalers, and retailers start trying to cut them back to a comfortable size. Sales fall off, but production drops even faster. And over a

period of time, inventories gradually come down to what feels like a satisfactory level. Then everybody has to come back into the market.

In the other, stocks also get too high and the cutbacks start. In this case, too, production drops—but sales drop even faster. And so inventories continue to increase, even though business is trying to shrink them. This sets the stage for a drastic contraction, a violent drop on the 1937-38 model.

The question is: Which kind of inventory recession are we having now?

• **How It Looks**—The answer, on the basis of all the figures available to date, is: the first kind, the milder one.

This explains the optimism Arthur F. Burns, chairman of the Council of

duced a feature on the coffee shortage.

CBS has much the same thing in mind for The Morning Show. And as a matter of fact, so does NBC—for a nightly version of Today. (NBC has already beaten the competition to a mid-day magazine show, called Home.)

At ABC, the thinking is in much the same direction: a weekly news feature show that would cover one or two stories; a documentary to explore the

physical and social map of the U.S.

• **Wait and See**—The swing to the new, more flexible format promises to take care of one of the big problems that has plagued TV's attempts to handle news. But format changes alone won't provide any answer to what is probably the biggest problem of all—the question of quality and content. That is something the industry still has to face up to.

giving manufacturers a chance to use up old stocks. In recent weeks, steel mills have seen a tendency for customers who have been living off inventory to come back in the market (BW—Feb. 27 '54, p30).

• **The Posers**—Nevertheless, the data, both official and unofficial, pose some questions that they do not answer. They do not make it absolutely clear whether what we are experiencing is only the mild kind of inventory recession, or something more serious. Nor do they give any sure indication as to when the present correction will be over.

The inventory liquidation to date is enough to account for most of the decline in production and for the upturn in unemployment. There have been some price cuts and forced liquidation, of course, but determination to trim stocks has not led businessmen to resort to panic devices. As a matter of fact, there is plenty of support for Burns's view that the decline will be over as soon as business finishes correcting its inventory levels.

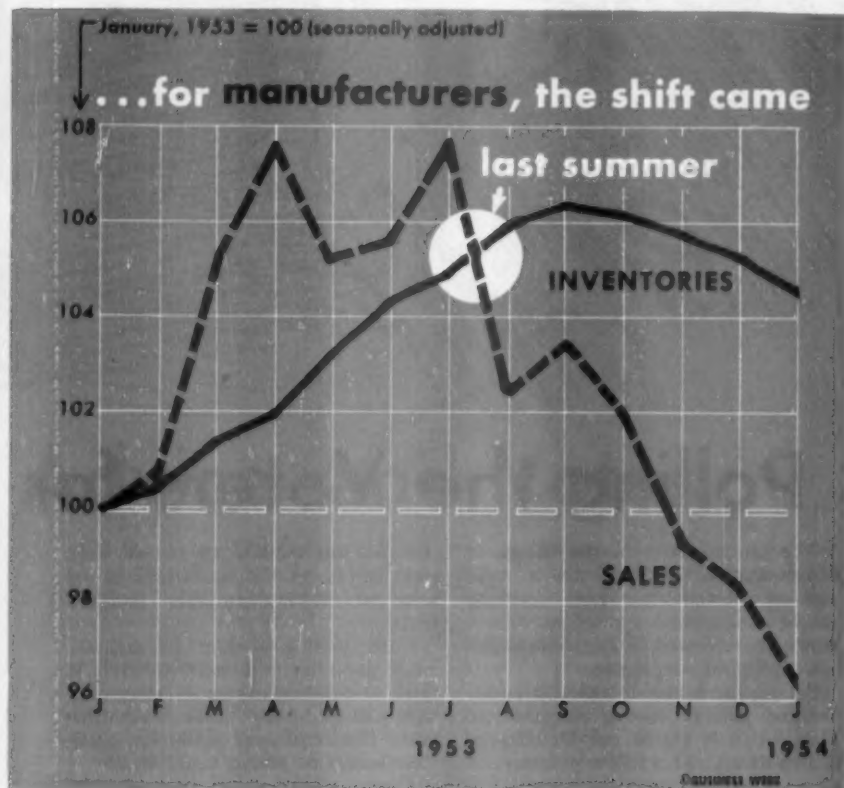
• **Stocks vs. Sales**—On the surface, as the charts show, the correcting still has a long way to go. Manufacturers' inventories, which reached a peak of \$47.1-billion in September, had dropped only \$700-million through January. Similarly, retail stocks had declined only \$400-million from the high point last year. But that's because sales, which began sliding while business was still piling up goods, had declined up to that time even faster than inventories.

Thus, there's still a big imbalance between sales and stocks. But the fact that inventories are now being cut even as sales decline suggests that stocks, in relation to sales, can be brought into balance fairly soon.

• **The Answer**—The key questions will be answered by the customers. If consumer demand stops falling, the adjustment should work itself out by the end of the second quarter. If demand should rise, even a little, it could bring a sharp upturn in business. Only if there is a sharp decline in demand can the inventory correction have a cumulative effect.

The leveling off of consumer demand last summer was mainly responsible for the inventory correction. During the first half of 1953, industrial production expanded to meet expanding demand. But it rose above sales in order to build up inventories that had been depleted by the steel stoppage in 1952. When sales leveled off at a high peak last summer, inventories continued to pile up. Production, in fact, was cut back before inventories stopped accumulating.

• **Repeat Pattern**—This is the normal pattern when producers guess too high on the level of demand. The balance



Is Encouraging

Economic Advisers, spread around this week when he told a Philadelphia audience that business sales are currently running ahead of production. With the reduction in inventory buildup, and continued high sales, he said, "a foundation is being laid for a new economic advance."

The Burns announcement came hard on the heels of the Dept. of Commerce's inventory statement for January, the latest month on which it has compiled detailed information. The statement showed that the inventory adjustment, which touched off the business decline last summer, was not slackening in 1954.

Total business inventories, at \$80.7-billion, registered a drop of less than 1

of 1% from the December level. But manufacturing inventories were down \$300-million at seasonally adjusted rates, the fourth straight month of decline. Wholesale inventories were up slightly, but retailers' stocks were reduced \$100-million, marking a resumption of liquidation after a small rise in December caused by excessive Christmas stockpiling.

Even before Burns's announcement, there was little doubt that inventories had been still further reduced since January. Retailers surveyed by BUSINESS WEEK (page 25) report that they have succeeded in paring stocks to more satisfactory levels. And steel, for example, slowed down last week to an operating rate of 68.9% of capacity,

between stocks and sales gets out of whack. Such trouble brought on the inventory recession of 1949-50, and the pattern is being repeated today.

You can't get the complete picture from Commerce's figures, because they are estimates taken from a small sample. They do not give an accurate breakdown of different industries. In addition, there may be a considerable margin of error in the stock-to-sales ratios.

It seems clear, however, that the inventory cutback is quickening. During the last quarter of 1953, business cut back at an annual rate of over \$3-billion. The January figure, calculated at an annual rate, looks even better, and Burns's later estimates give proof that the correction is well in hand. The main reason for his confidence is that, though sales have declined somewhat, they are still at a high level. In addition, commodity prices are firm; and business confidence, as reflected in the stock market, is unimpaired.

• Ups and Downs—Some industries, of course, have been less successful in paring stocks than others. Autos, for example, have a problem. New cars have piled up in dealers' hands despite cutbacks in production. Winter sales have been sluggish, so that stocks in relation to sales reached record levels in February.

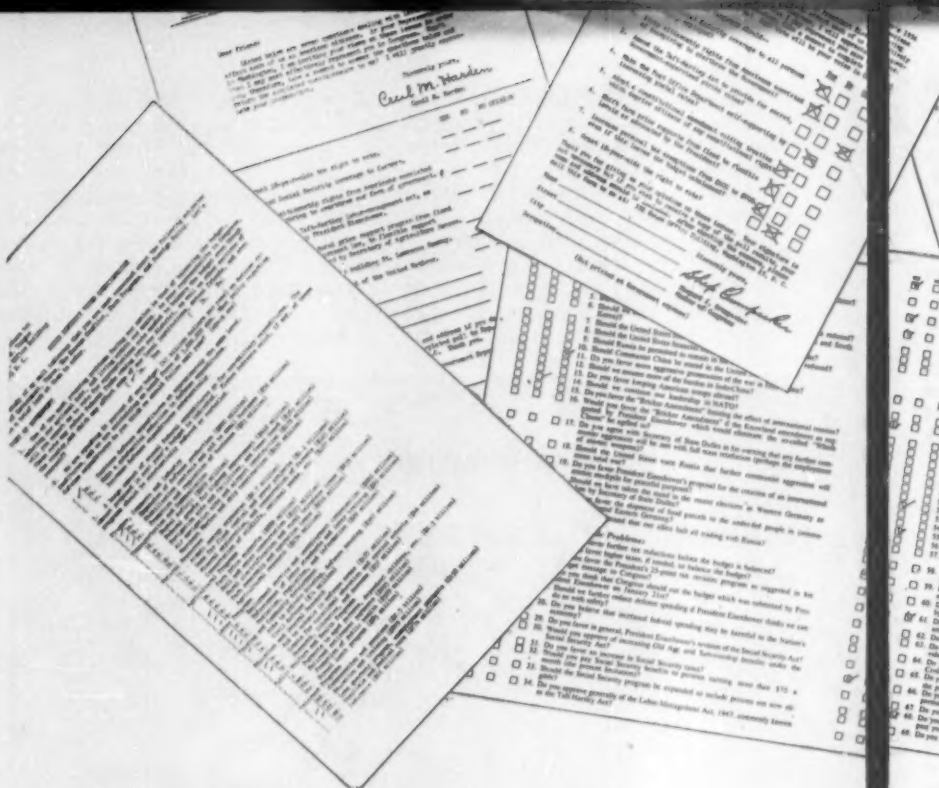
Dealers sold more than 400,000 new cars in February—up from 355,000 in January and well ahead of February, 1953. But even so, according to Ward's Automotive Reports, stocks on Feb. 28 were 3% higher than they were on Jan. 31.

A BUSINESS WEEK survey last week (BW—Mar. 6 '54, p. 29) showed that sales were beginning to show the customary spring rise. But if customers should slow their buying, the heavy inventories now in dealers' hands may cause another downturn in production—and a cutback in purchases of materials and parts.

On the other hand, if March sales reach the mark of a year ago—about 520,000 units—the sales-to-stock ratio would look good and business all down the line would firm up.

• New Orders Off—Another unfavorable factor is that new orders have declined along with inventories. Manufacturers' new orders dropped \$3-billion in January with two-thirds of the decline coming in durable goods.

On balance, though, the inventory picture is encouraging—because a good part of the correction seems over. If the pattern continues, production will actually begin to rise before the inventory correction is completed. That will happen if buying holds up. Then dealers would have their shelves practically empty before replacement orders were delivered.



Polling the Voters for

The offset presses in the House of Representatives printing offices were working overtime this week cranking out questionnaires—similar to those shown above—based on President Eisenhower's legislative program.

Polling the home district is a mushrooming practice among congressmen. They aren't trying to put Dr. George Gallup or any of his fellow pollsters out of business. It's just that some 130 congressmen have discovered that public opinion polls are mighty handy devices for winning votes and impressing constituents—and in the process, getting some idea of what the home folks like and don't like.

• Public Relations—The practice has caught on since the war. One of the pioneers was Vice-President Richard Nixon, shortly after his election to Congress in 1946.

Before that, congressmen figured that they had to go home from time to time to get the "feel" on current issues. After a congressman got the feel of his district, he could pretty well "play it by ear." Obviously, the practice proved disastrous for members who were too tone-deaf to sense the shifts in home opinion.

But opinion sampling is not the main idea in the polls, and few congressmen rely on polling alone to decide how they will vote. The poll is primarily an effective public relations tool. More conscientious members also feel they

can use this method to inform their constituents on the issues and to get some guidance in "educating" their districts.

Little polling is done by senators. They don't feel the need to keep so close to constituents as do representatives who are up for election every other year. The expense of polling an entire state would be almost prohibitive.

• Unprofessional—Few congressional pollsters would get a passing mark from the professional opinion seekers on polling technique. Most members prepare their own polls without professional help, and in so doing break about every rule in the book. But the results are so gratifying that few ever abandon them—although it means shelling out from \$200 to \$800 of their own money each time.

• Costs—Here's how a congressman figures his polling costs: Paper will cost from \$1.80 to \$2.50 per 1,000 sheets, depending on grade; the printing office charges \$2 per 1,000 for offsets; there's no mailing cost, if he uses his franked envelope—which he is entitled to do in seeking guidance on legislative matters.

If he buys a poll tax list or registered voters list it may cost from \$15 to \$35 for each county in his district. Professional tabulators charge \$10 per 1,000 to tabulate results. Using return envelopes and postage to increase replies means an added cost. He can figure on about a 10% to 12% reply.



Advice—and Votes

• **Off the Beam**—The professional pollsters say here is where the average congressman makes his mistakes: His questions either oversimplify the issues and thus fail to draw out attitudes, or they are so complex as to be confusing. One of the most common failings is loading questions to draw replies that will support positions the members have taken or plan to take on controversial issues.

Most congressmen ask too many questions. They fail to do any preliminary sampling. The mailing list for their 40,000 to 60,000 questionnaires is unscientifically selected. And most of them fail to make use of the replies.

• **Exception**—One of the few members who conducts anything like a scientific poll is Rep. Oakley Hunter, Republican of the 12th California District. The reason: His executive assistant, Carl Hauvre, is a professional public opinion researcher. Here's how they go about it.

Hauvre begins with a "pinpoint" survey of the district to determine whether his questions are good ones. He selects 50 voters over the district—chosen scientifically as representative. When the answers come back, any question that draws over 10% "no opinion" is tossed out as a bad question. Others may be reworded.

Hauvre next decides how many questionnaires to distribute. Polling everybody in the district is too expensive, so he picks a rough figure of 5,000. That

would mean 3% of his registered voters, which finally works out to 5,400 ballots. So he goes through the registration books, picks out every 33rd name, and makes up addressograph plates to form his permanent sampling base.

He encloses a return envelope, figuring this will increase replies by 5%. He tabulates his results by IBM, puts them in a newsletter. It all costs about \$600, but returns range from 33% to 55%—way above average.

• **Sneers**—Polling is done primarily by younger congressmen—young in point of service—and by those from close districts. Few veteran Southern Democrats, or Republicans from "safe" districts, have any use for polls. A lot of old-timers look down their noses at the poll craze. Some say their constituents would think they'd gone crazy if they started sending out polls.

"Any congressman who has to rely on polls to find out what his district thinks," says one Southern veteran, "won't be around very long." Others contend that replies tend to come in mostly from cranks and people with an ax to grind, and are not representative.

• **Praise**—But it is hard to find congressmen who have held polls and are against them. They make no secret of the public relations benefits. They point to the enthusiastic notations that come in on backs of questionnaires: "Thanks for the chance to express my opinion." Or, "This is the first time a

congressman ever asked how I felt about anything."

So many voters are influenced by name familiarity that mail from a congressman may be just enough to pull their votes away from contestants with whom there has been no contact.

• **Unusual**—Here are some of the unusual methods employed:

Rep. Omar Burleson (D., Tex.) co-sponsors his poll with the Abilene Reporter-News. The paper pays half the cost in return for breaking the story first and carrying a reproduction of the questionnaire.

Rep. Horace Seely-Brown (R., Conn.) makes a door-to-door canvass, nets a better than 50% return.

In Republican South Dakota, Reps. Harold Love and E. Y. Berry call meetings in each of 44 counties, hand questionnaires to all who show up; they get 60% response.

Rep. Alvin Bentley (R., Mich.) completed a poll the day he was shot down by Puerto Rican Nationalists; he got an 18% return on 53,000 questionnaires (using automobile registrations, plus telephone directory), by providing return postage as well as a return envelope.

Rep. Joel Broyhill (R., Va.) sent out a cumbersome, 77-question poll that many of the pros regard as a "horrible example." He blanketed his district with 112,000 ballots, to date has received almost 15,000 replies.

• **Special**—Some of the polls have their own special stories:

Rep. Jacob Javits (R., N.Y.) hired a professional pollster to check the 21st New York District before he ran, to find out how it stood. He got elected by campaigning for the favored issues.

Rep. Olin Teague (D., Tex.), accused of asking loaded questions, challenged a critic to help prepare his next poll. The critic consented—and admitted that objective wording was no easy task.

Rep. Shepard Crumpacker (R., Ind.) found his poll an election issue in 1952, his opponent charging that the 100,000 queries he sent out under his frank were an abuse of the franking permit.

• **Easier**—Polls are getting so popular that steps are being taken to make them easier—and more effective.

New postal regulations permit the congressmen to get delivery to all urban households simply by sending out an envelope stamped "patron, letter carrier."

Rep. Harold Hagen (R., Minn.) has introduced a bill to print opinion polls on the ballots, and turn results over to the congressman for his guidance.

There is also a drive under way to set up a professional staff of public opinion experts in Congress to help members prepare sample ballots, iron out polling problems, and tabulate results.

Atomic Power in Five Years

That's the goal of a new AEC program. The commission hopes to get cheap, commercially usable power from at least one of the five reactors it plans to build.

The Atomic Energy Commission this week announced a program aimed at developing reasonably priced power from nuclear fuel—without waiting a decade for the results. The span of the program is set at five years.

This fast-paced operation will involve five nuclear reactors. One is already taking shape in the shops of Westinghouse Electric Corp. (BW-Oct. 31 '53, p. 27). The other four will come along as soon as AEC can scrape together the necessary funds. The reactors will all be of different types. AEC hopes that one or two will actually produce commercially usable electric power; the others will justify their expense by contributing generously to the textbooks—still frustratingly slim—on how to coax power out of the atom.

The commission also indicated this week that it is about ready to award a contract for a sixth project—a small nuclear power plant suitable for use at an Army post. This joint AEC-Army venture will be a packaged plant that might possibly be moved from time to time. Power costs won't be a prime factor in its design; hence, it isn't considered a part of AEC's special five-year program.

• **Policy Shift**—All this activity in the field of civilian power marks a significant policy shift for AEC. In the past, the commission has concentrated on bombs and other weapons of war. It was only last year that AEC began to take seriously the idea of the atom in mufti. It announced plans then for its first big-scale reactor suitable for producing industrial power—but even that one wasn't calculated to bring the cost of atomic power down to a practical level.

Now, with its new five-year plan, AEC shows that it has bought the philosophy of a civilian atom. The program is essentially what many atomic scientists have been urging for years. It was developed and written at the express direction of Congress, which has generally seemed more interested than AEC in developing peacetime atomic power.

• **Motives**—Congress' insistence was not the only force that brought the five-year program into being. The atom commission had some good reasons of its own for launching the plan.

For one thing, AEC was interested in getting the government's nuclear campaign outlined clearly, in black and white, so that private industry could

plan its own research and study programs accordingly. If the government had no definite outline to offer, industry might hang back until a sharp picture did emerge. This way, presumably, both government and industry will be at work—and the store of atomic knowledge will grow that much faster.

AEC's prime reason for embarking on the five-year program, however, probably was to keep in the good graces of foreign raw materials suppliers—nations such as Belgium, which supply a good part of AEC's fissionable material and other necessities. These nations desperately need new sources of power. They want the U.S. to share some of its nuclear know-how with them.

Belgium, for instance, has openly threatened to choke off supplies of uranium from the rich Congo deposits unless it has access to power reactor information. It's no secret that present agreements with Belgium won't be renewed unless the U.S. comes through with some useful atomic data. Undoubtedly, AEC hopes the five-year program will turn up the kind of useful knowledge Belgium and other nations are looking for.

• **The Plants**—The program, according to AEC Commissioner Henry DeWolfe Smyth, includes building and operation of:

- A 60,000-kw. pressurized water reactor, at a cost of some \$45-million. Because of the high capital cost, this one won't turn out power cheap enough for commercial use. It's on the drawing boards now at Westinghouse, and is scheduled for completion in four years.

- A medium-sized breeder reactor with a capacity of some 15,000 kw. This one probably won't turn out competitive power either.

- A boiling-water reactor with a capacity of 5,000 kw. Economics of this one are still largely a matter of guesswork; it's hard to say how much its power will cost.

- A homogeneous reactor—a scale-up of an experimental model now in operation at the Oak Ridge National Laboratories in Tennessee. In this type of reactor, the fuel, the coolant, the moderator are all mixed together into a radioactive soup. Again the economics are none too precise, but some experts think this reactor offers the best hope for production of cheap, commercial power.

- A high-temperature reactor. Economics of this one are too dim to allow a meaningful guess as to what its power might cost.

- **Funds**—Of these five, Congress has appropriated money for only one—the reactor now being designed by Westinghouse. By midweek, AEC had given no indication whether it will try to get more funds for the 1954-55 fiscal year, which begins July 1. It looks likely that AEC will try. If it wants to get its program under way fully and quickly, it will need congressional authorization during the current session.



New Use for an Old Mountain Railroad

The Denver & Rio Grande Western RR was ready to abandon this 72-year-old narrow-gauge rail line this year. It had outlived its usefulness; most of the mines it once served in the Colorado mountains had closed long ago. Now

a business group headed by William Kostka, Denver public relations man, plans to buy it and turn it into a sightseeing train. The group hopes a national advertising campaign will make the trip famous and profitable.

The man who turned white every night!

by Mr. Friendly



When the 5 o'clock whistle blew each night
Herbert H. Haddock turned pale white
... for 3 good reasons, *fright, fright, fright!*

He feared for his workers, valuable men,
He said, "I tell them again and again
To watch both ways when crossing streets.
Safety first, I repeats and repeats ...

"But every night they're on their own ...
Risking valuable flesh and bone!"
That is the cause of my fearful plight ...
That's why my dark blue suit turns white!"

AMERICAN MUTUAL

Service from salaried representatives in 78 offices!
Savings from regular substantial dividends!



"A new answer to the problem of off-the-job accidents!"

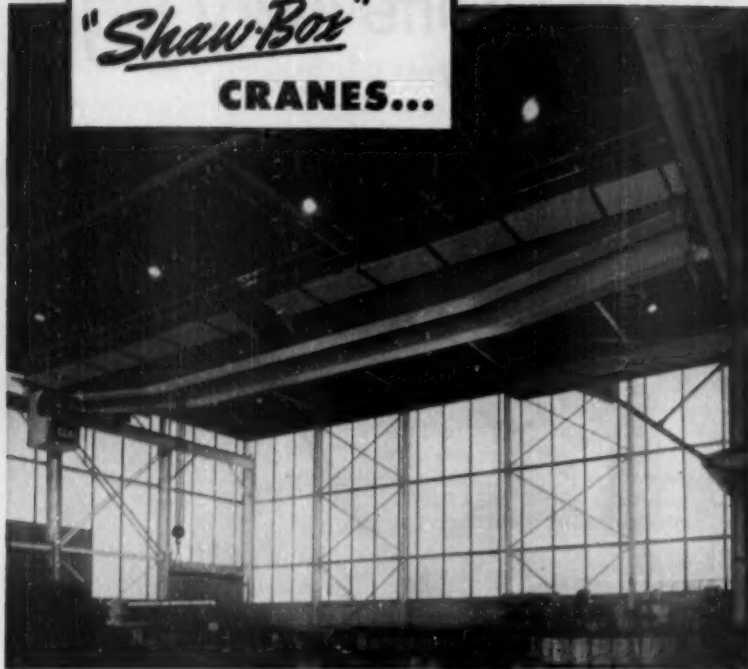
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Extra years of efficient, economical operation and freedom from costly maintenance are yours when you invest in a "Shaw-Box" Crane. Write for Catalog 219 showing "Shaw-Box" Full-Electric Traveling Cranes from 5 tons up; Catalog 218 for 'Load Lifter' Cranes from 1 to 25 tons; or Catalog 221 for Series "D" All-Electric 'Load Lifter' Cranes from 1 to 20 tons.



"Shaw-Box" CRANES

MANNING, MAXWELL & MOORE, INC. Muskegon, Michigan

Builders of "Shaw-Box" and 'Load Lifter' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of 'Ashcroft' Gauges, 'Hancock' Valves, 'Consolidated' Safety and Relief Valves, and 'American' Industrial Instruments.

BUSINESS BRIEFS

The growing giant: General Motors' sales for 1953 topped \$10-billion, the largest figure ever recorded by a U.S. corporation. Unit vehicle sales were close to 3.5-million, second only to 1950. Net earnings per share were \$6.71, a gain over last year's \$6.25, and exceeded only in 1949 and 1950.

Dockside ore supplies at Great Lakes iron ports are so great that as many as one ore ship in five may be mothballed this summer, industry sources think. With the iron ore shipping season about to open, stocks were reported at almost 42-million tons on Feb. 1—the last official count. That was 15% above the 1953 date, and the highest mark since 1944.

A 22-year receivership is ending for Wisconsin Central Ry. Co. A federal court in Minnesota has ordered the road to be turned over to a new corporation under a reorganization plan O.K.'d by ICC. However, the original company and some holders of preferred stock are still fighting the plan.

Private enterprise has another foot in the door of the Atomic Energy Commission, though it's a smallish foot. Management Services, Inc., the federal housekeeper of the Oak Ridge (Tenn.) installation, is turning over the selling of home-heating coal to whatever private companies may seek the business. After May 1, 4,250 Oak Ridge residents will be able to buy coal from anyone they choose.

Going, going — Surplus construction equipment, ranging from a 35-ton drag line to a batch of pickaxes, is being auctioned off in Dallas this week. A general slowdown in building has caused builders in the Southwest to dispose of some \$6-million worth of equipment.

Last-minute price cuts on some 900 items are featured in the latest Sears, Roebuck catalog. The cuts, running as high as 69%, are listed in a special 24-page insert in the 320-page tome. Among the items: an electric tachometer kit for cars and trucks down from \$57 to \$17.88.

The public is invited to participate in the \$77-million loan pool planned as part of the self-liquidation of the Reconstruction Finance Corp. (BW-Jan. 30'54,p34). Investors have until Mar. 25 to apply for shares in the pool, which will be allotted before Apr. 5. No limit is set on the amount; interest is 3½%.

See what adhesives are doing today!



Running rings around assembly costs

Here's another example where comparison proves the advantage of adhesives over mechanical means for fastening.

At Crosley, to complete the assembly of a compressor housing, three operations were required: (1) a weld, (2) positioning of steel lid, (3) shooting the fasten'g screw. When Crosley switched to the use of a 3M adhesive, EC-847, for this operation, the number of parts needed was reduced, production time was cut down, and savings in assembly costs were realized.

As a matter of fact, today at Crosley, one man (pictured above) performs the entire operation, maintains production of over 1000 pieces in an 8-hour shift.

See what adhesives can do for you . . .

Perhaps 3M adhesives can better perform your fastening operations, too. To check, just call in your 3M salesman. For a free booklet giving examples of how 3M adhesives can help, write today to Dept. 13, 3M, 417 Piquette Ave., Detroit 2, Mich.



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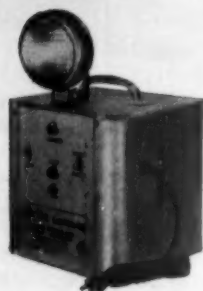
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WASHINGTON OUTLOOK

WASHINGTON
BUREAU
MAR. 13, 1954



Eisenhower won't veto an excise-tax cut. He doesn't like it one bit. He isn't sure it's needed to reverse the business trend. And besides, it will run up his deficit. But odds are he will go along.

Congress has the President at a disadvantage. As the law now stands, some \$1-billion of excises will come to an end Apr. 1. Congress is extending some of these—on liquor, tobacco, gasoline, etc.—but it's cutting others to the tune of nearly \$1-billion. If Eisenhower vetoed this move, Congress could put through a cut anyway, simply by refusing to act on the rates that automatically would go down Apr. 1.

—•—
The first real showdown on cutting individual income taxes will come within a week when the House acts on the general tax revision bill.

Eisenhower wants to hold the line—at least until his economic advisers get a firm feel of the spring business trend. But the income tax issue has become deeply involved in election year politics.

The Democrats still are plugging for higher exemptions. They argue these are needed to give the consumer more spending money and thus stimulate business. And they charge the Eisenhower program of incentives for investment favors business at the expense of the individual.

It could be that Eisenhower may have to compromise in the end. If he does have to take an individual income tax cut, he would rather have a reduction in rates than a higher personal exemption. (The Administration wants to retain the broad individual income tax base.)

—•—
Other legislative troubles are ahead for Eisenhower. The score at session's end will show enactment of many of Eisenhower's proposals. But on some key issues, the President can't control his thin majorities in Congress. These are the politically sensitive areas where members vote what they figure will help them most in the fall, regardless of what happens to the official party line.

—•—
Congress may boost butter price supports, reversing Secretary of Agriculture Benson. Benson only recently cut butter price supports from 90% to 75% of parity. The idea was to get price down, boost consumption, and cut government stocks.

But Congress wants to set the butter support by law—85% this year, 80% next year, then let it go down to 75% if there's still a surplus.

Eisenhower's general farm plan will be rewritten. It isn't sure yet just what Congress will do. But there's enough opposition in both parties to postpone the date when flexible (meaning lower) price supports can be ordered. Few farm-staters in House or Senate will vote to cut supports next year—not while seeking reelection this fall.

—•—
Taft-Hartley revision is all snarled up. Both parties are badly split on what to do. Neither is paying attention to Administration ideas.

The House will tip you off on what to expect. It's supposed to act first on this issue. Right now, the prospect is that any bill voted there will weaken union power far beyond anything the Administration will take.

The prospect still is for no T-H legislation. Sweeping revisions voted in the House would kill the issue for the session. The Administration knows

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
MAR. 13, 1954

this. The National Labor Relations Board, in fact, is working on the assumption that the law will not be changed this year.

Renegotiation of defense contracts will continue. The law has lapsed, but it will be revived retroactively.

Social security expansion and liberalization will be voted this year. But final action will come late in the session.

Liberalized home financing seems sure. Congress has been slow starting on this part of Eisenhower's program, but signs are it will go along.

St. Lawrence Seaway: U.S. participation will be voted.

Statehood for Hawaii still is a good bet, although the Democrats may kill it by tacking on Alaska.

Relaxation of the atomic energy law is uncertain. Opposition is strong to all proposals that would give weapon information to the U.N. countries and industrial information to private industry here at home.

Allowing 18-year-olds to vote isn't well thought of in Congress.

Health insurance, as proposed by Eisenhower, is bogged in dispute. Chances for action this year are slim.

Stripping Communists of citizenship was the big applause-maker in Eisenhower's State of the Union Message. It will be considered, but there's no certainty of action.

Kyes didn't quit mad, despite the implication in some news stories that his resignation was in some way linked with the McCarthy controversy. The Deputy Secretary of Defense came to Washington with the understanding that he would serve a year, then return to business. The announcement at this time did cause embarrassment. But it followed a news "leak" of Kyes's plans.

Robert B. Anderson, the new deputy, is one of the most popular Pentagon officials. As Secretary of the Navy, he has turned in what Secretary of Defense Wilson considers a first-rate job.

The Democrats are about to pull out the political stops. Here are examples of the party line, as agreed to this week: fight on taxes, charging Eisenhower favors business over individuals (Eisenhower will answer in a broadcast); fight on farm plans, charging Eisenhower's flexible price supports mean lower farm prices.

The GOP faces the danger of being put on the defense. This could muddy Eisenhower's leadership and obscure his legislative program. For example: Ex-presidential candidate Stevenson's Florida speech could have been ignored as yapping for the "outs." But the Republican Party had to claim time to reply. Otherwise, McCarthy would have got the time, and the Democrats would picture him as the official GOP spokesman. The Democrats will probably repeat this maneuver.

It looks as if this will be the hottest congressional election in years.

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KEEP your ears open. Next time one of your buddies starts to brag about the extra distance he's getting—it could be true.

A new golf shaft has been introduced by True Temper. Called the Rocket, it actually gives you extra yardage on every shot.

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The new steel draws easier and heat treats better. It's tougher, stronger, more shock resistant—without adding weight.

Shafts can be made to closer tolerances. These properties, combined with the new design, give the shaft its amazing power.

It's the result of the continued effort of True Temper engineers to improve their designs. It even surpasses the finest they've produced in the past.

If you're like the rest of us and want to improve your game and enjoy it even more, why not try this new shaft? And if you're searching for an answer to your steel problem, why not let us help you? The Timken Roller Bearing Company, Steel and Tube Division, Canton 6, Ohio. Cable address: "TIMROSCO".

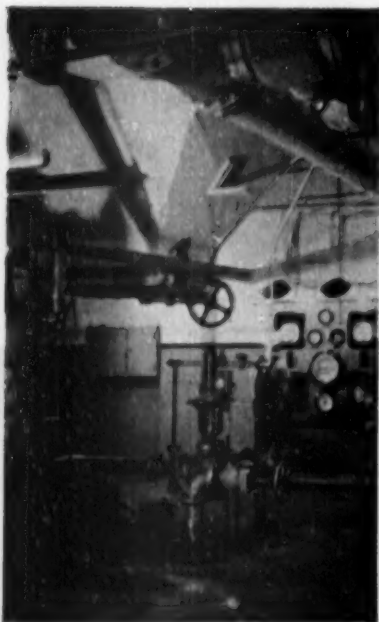
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Chemical cellulose is produced in a variety of types, determined by industrial end-uses. It is essential to such growth industries as rayon tire cord, acetate and rayon fabrics, photographic and specialty papers, cellophane and plastics.

New developments such as Rayocord-X point to even greater usefulness for this versatile raw material.



NEW PRODUCTS THROUGH RESEARCH. Rayonier Research has consistently led the way to new, advanced types of chemical cellulose to meet growing demand, new challenges. For example, in 1935, Rayaceta was introduced for the specialized requirements of acetate producers. In 1952, they required a high of 80,000 tons.

Similarly, in 1935, several of rayon's problems were aided by Rayonier's Hicolor. 1953 consumption of Hicolor was over 76,000 tons. And as early as 1934, Rayonier pioneered the first chemical cellulose for a specific use other than rayon. Developed for the growing cellophane industry, 74,000 tons were consumed in 1953.

Thus, improved cellulose means better, low-cost products, wider markets.

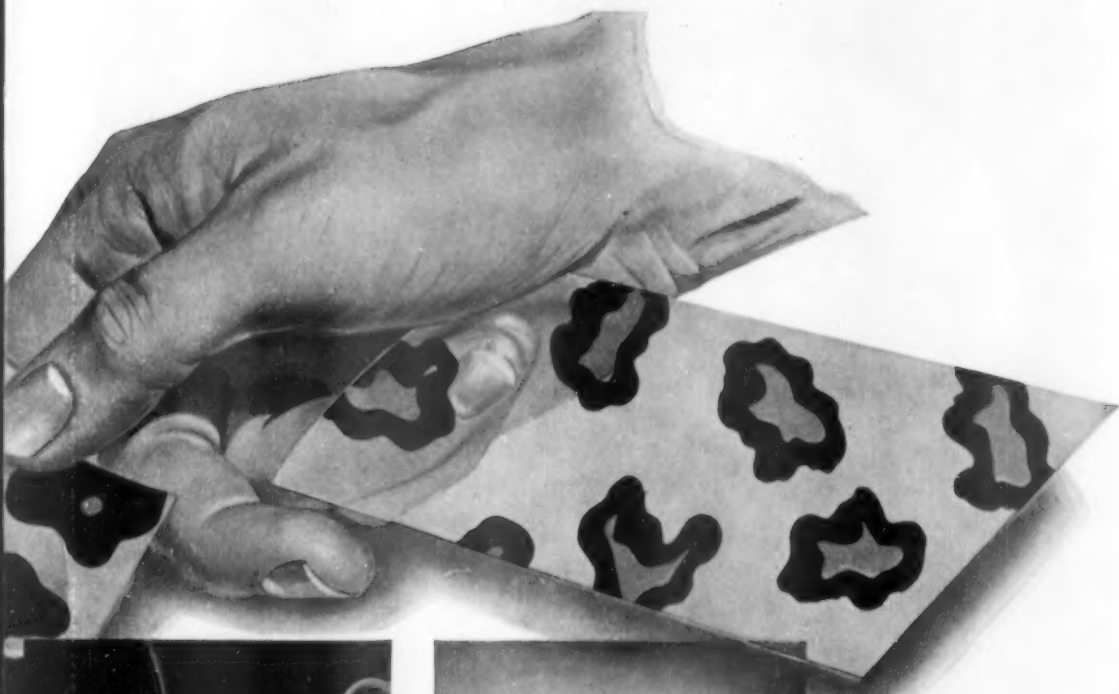
ENTER RAYOCORD-X. Several years of research produced Rayonier's new chemical cellulose, Rayocord-X.

A basic product improvement, the molecular structure of Rayocord-X makes it possible to employ new spinning techniques which stretch rayon filament 100% and more—imparting new strength to the finished product. Conventional rayon tire cords possess strong outer skins, dyed blue in the photomicrographs above, but their cores (dyed yellow) lack strength because, in spinning, their filaments are stretched only up to 60%.

The unique composition of Rayocord-X is important news to Rayonier's rayon-producing customers. It furthers their competitive position substantially.



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NEW FIBER; NEW MARKETS. Auto and truck tires built of cord produced from Rayocord-X will possess greater resistance to fatigue and shock. Over 70% of today's tires are made with high tenacity rayon cord, and the new advantages of Rayocord-X promise to broaden that market.

Rayocord-X looks good to other textile producers, too. The new yarns have high strength, better wearing qualities. They will withstand laundering. While other rayons swell as much as 150% when wet, rayon fibers can be produced from Rayocord-X which swell only 65%-75%.

These experiments open up huge new markets for rayon heretofore held by cotton, such as sheets, shirtings, handkerchiefs, other consumer soft goods.



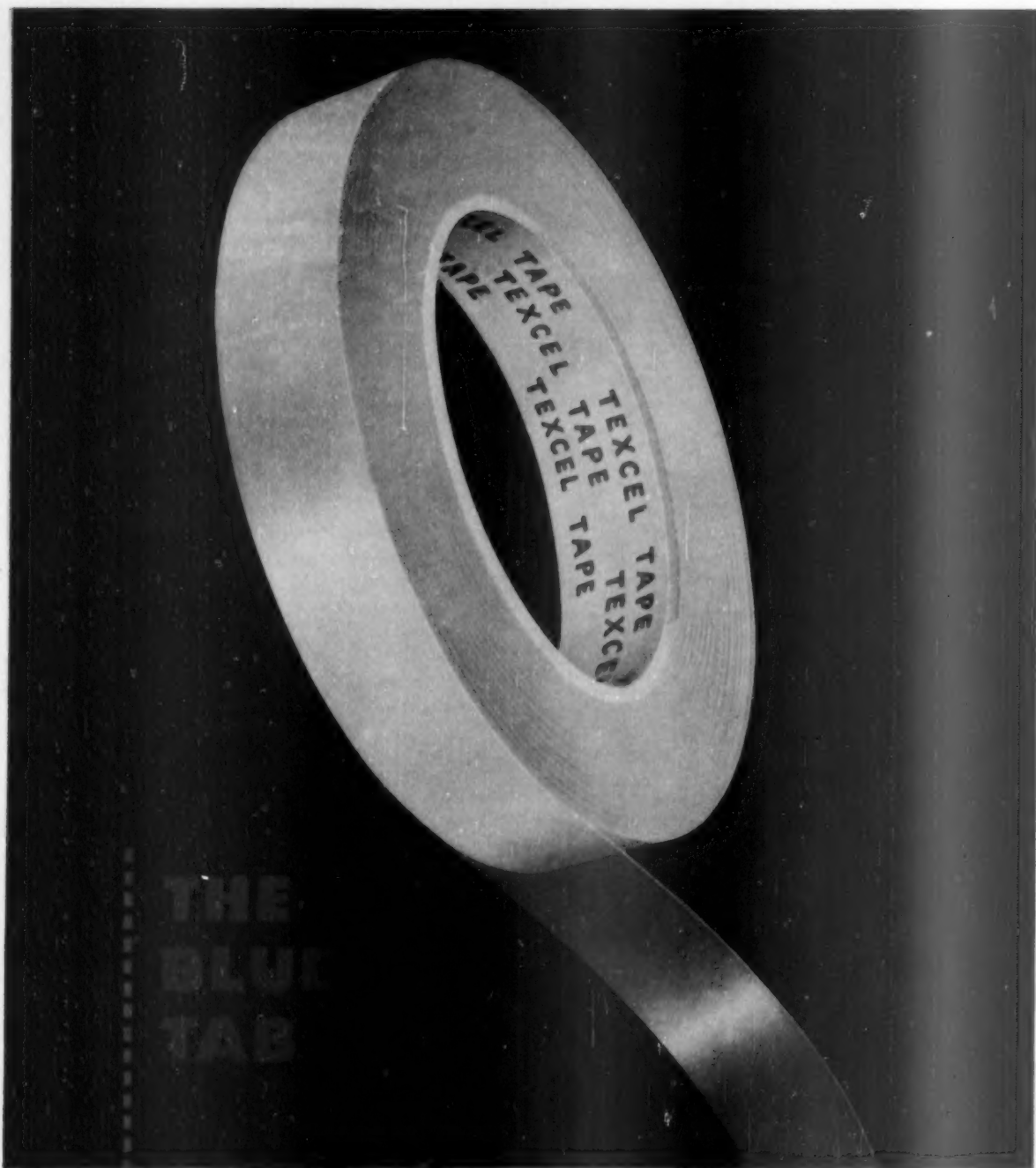
NEW DIRECTIONS. Scientists say strengths far above anything yet obtained are possible in regenerated chemical cellulose filaments like rayon. Their calculations range up to 15 grams per denier—strength almost unknown in any other material! Rayocord-X helps bring such goals in sight, and still another advanced type of cellulose will be available with the opening of Rayonier's new Jesup, Ga., plant.

This constant development of even more adaptable chemical cellulose without commensurate price increases; ability to diversify production and product; a lead in the new field of silvichemistry; experienced employees; ample resources; all prepare Rayonier for new markets, new world conditions.

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MARKETING

For Rent: Just About Everything

The consumer rental market started with a few items. Today it includes . . .

Color TV sets
Beds
Tuxedos
Trained geese
Concrete mixers
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Autos and trucks
Diapers
Post hole drillers
Floor sanders
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Linoleum rollers
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Linens
Asphalt tile cutters
Punch bowls
Play pens
House jacks
Rug scrubbers
Chain hoists
Garden tools
Coffee urns
Drop cloths
Axes
Banquet tables
Extension cords
Vacuum cleaners
Welders
Bridge chairs
Oxygen tents
Paint sprayers
Wallpaper steamers
Baby cribs
Strollers
Sewer rods
And many other things

Last week Emerson Radio & Phonograph Corp. startled the television world by announcing it isn't going to try to sell its first color TV sets; it's going to rent them. Whatever the industry reaction may be, the move throws a sharp spotlight on a fast-developing aspect of today's merchandising generally: Rentals are on the rise.

Consumers for years have read books, driven cars, diapered babies, sported tuxedos all on a rental basis. For years, too, hardware shops and lumber yards have rented tools as a sideline. By now, consumer rental has graduated to a full-fledged business, covering everything from cake cutters to concrete mixers (table)—with its own special set of merchandising problems and techniques.

• **A Bit of Everything**—The latest trend in the rental scene is the sprouting, here and there, of companies whose aim is to offer a sort of one-stop renting service, where practically everything can be had. Such a company is Rent-All Corp. of America, which started business last month in Springfield, Ohio; it rents anything from garden tools to play pens, from silverware to welding equipment. Another is the U-Rent-It-Shop, a Grand Rapids concern that opened up a year ago with some \$33,000 worth of inventory. In Chicago there's the GEE Lumber & Coal Co., which rents out over 200 pieces of equipment—mainly to householders.

No one knows how big the business is. But most people agree that 1953 was the biggest year yet. This surprised some, who had figured it primarily a depression business. Yet its growth seems to stem naturally from some of the major social and economic changes that set today's marketing patterns.

• **Who Rents?**—The bulk of the rental service falls into three groups: those who want something—a silver coffee pot or a power tool, say—that they can't afford; those who could afford to buy but haven't the storage space; and those who need something for an occasional or one-shot project: to cut tiles for a new kitchen floor, or to throw a big church supper.

Customers in the first category turn up all over. Transients contribute a good deal to the second group. The man in Washington for a government stint of uncertain duration, the Army man who may be transferred, the defense worker whose job may drop out from under him, all make a fine market

for rented household linens, beds, play pens, flat silver.

The homeowner is the mainstay of the third group. He is spurred by the mighty do-it-yourself trend.

• **It Takes Doing**—Obviously the rental market is a big fish. How does a company go about catching it?

Immediately, experienced operators sound a warning. The rental business is no snap.

First of all, it takes a costly inventory. Power tools, garden tractors, and such don't come cheap. If the operator makes a bad choice of stock, he can lose his shirt. Some companies estimate you need \$30,000 to \$40,000 worth of stock.

The customers themselves often dictate what a rental operation shall carry. Take the case of Springfield's Rent-All Corp. Its founder, Matthew M. Brown, is a 40-year-old attorney who owns a farm and manages several properties. He got the rental idea a couple of years ago when he needed some farming tools.

Brown's shop is an unpretentious storeroom stocked with some \$6,000 or \$7,000 of inventory. He started power tools, garden equipment, cleaning equipment, painting, papering, sanding machines, as well as household supplies.

At the start, Brown had no idea of carrying typewriters and adding machines. He changed his plans fast, when calls for typewriters started to pour in.

• **Seasonal**—One inventory hazard is that demand is seasonal. In the early spring, everyone wants a small tractor or other heavy garden tool. Later on, it will be trowels, hedge clippers, weeders. Brown has a novel garden accessory: some trained geese, to weed his customers' strawberry patches. It seems that geese would rather eat weeds than strawberries or cotton—as cotton growers have known for some time. Demands also vary with regions. In New England, where everyone has a hardwood floor, sanders are a big item. They're no go in Florida, where floors are mostly tile. There, it's lawn mowers and garden equipment that people want.

Geography, in fact, explains why rentals made earlier headway on the West Coast, says Donald Bechtel, of Boston's Equipment Rental Co. People there have all year to putter around in.

• **No Formula**—What price to charge for renting is a burning question. Most people say there's no formula, or, if

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they have a formula, they keep it dark. One Detroit company demands a deposit of from 10% to 20% of the replacement value; another asks for a \$10 deposit on a \$100 machine—if he can get it. Some companies demand no deposits at all.

The cost of repairs—a heavy item in this business—usually figures in the rental. So does the life expectancy of the machine. One Cleveland company tries to recover the cost of the equipment in 10 rentals. GEE Lumber & Coal Co. in Chicago charges from 14% to 44% of the retail price per day.

Quite a few have a floor of 50¢ a day. Thus, Brown gets 50¢ a day for a step ladder; \$5 a day for a floor sander; \$10 or \$12 for a chain saw. A rollaway bed rents for \$3 a week. The trick is not to offer a rate that will make it easier to rent over a long period than to buy outright. Success in the rental business depends on fast turnover.

• **Advertising**—To get your customer, you must advertise. The classified telephone book is a favorite medium. When Brown started his Springfield concern, he had ads in the local papers, sent a mailing piece to every mailbox in the county. He has since added two radio programs a week.

All the business tends to come at once—on weekends, when the head of the house has some time to get that roof patched.

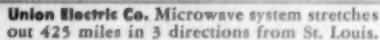
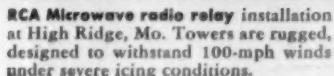
Experience will cure some of the ills, but other headaches are built in. "There are as many problems as there are customers," one company sighs.

• **Damage**—Biggest headache of all is the damage the customer can do to equipment. "Give a man a tool in perfect condition and he'll bring it back in two hours broken," says one company bitterly. The shorter the renting period, the worse the damage is likely to be because the customer works the equipment so hard to get the job done.

A Houston concern tries to avoid this problem by carrying only equipment that is easy to handle—and explain. Some companies, say, stay away from lighter equipment; it's too perishable. For all companies, repairs are a major cost item.

Insurance is one answer, but insurance comes high. Rent-All, for one, has insurance that covers breakage, damage, and theft. But it hasn't been able to get one kind: liability insurance to protect the company if the user gets hurt. Brown is negotiating with Lloyds of London for this. Meanwhile, he gets customers to sign a contract including a waiver of liability for injury to himself or damage to his property.

Some companies, which rent only ladders, have found a neat way to untie the injury knot. They sell the ladder,



Two years ago Union Electric Company of Missouri ran into the communication problem which sooner or later confronts all growing utilities: their high-line carrier transmission system had become inadequate.

The 150 kc bandwidth, allotted for power line carrier operation, permits the use of only a relatively few channels which are not sufficient to meet all the requirements of a modern communications system. Direct wire lines were ruled out as too costly.

That prompted engineers to adopt Microwave, supplemented with mobile radio at major relay points. RCA Microwave provides channels for remote control of load dispatching, telemetering, teletype and voice communication. It results in close co-ordination of vehicles, field crews, executive and service personnel at outlying offices and stations. And, 70% of the RCA Microwave system is available for future expansion.

RCA Microwave can be interconnected with existing phone lines and switchboards. It uses familiar channeling circuits and readily available tubes. It provides as many channels as needed with minimum use of frequency space.

Now Udon Electric has dependable, year-round communications over the full length of its operations. RCA "dish" antennas atop 100- to 300-foot towers, spaced 11 to 46 miles apart, send concentrated beams of radio energy from

station to station. The radio beams follow a line-of-sight path—approximately parallel to the transmission lines.

You, too, can plan now for tomorrow's problems—prepare for your expanding communications needs before they develop. The booklet listed below provides quickly digested facts for future thinking, with no obligation on your part. Mail the coupon. Remember, only RCA can provide the nation-wide service facilities of the RCA Service Company.

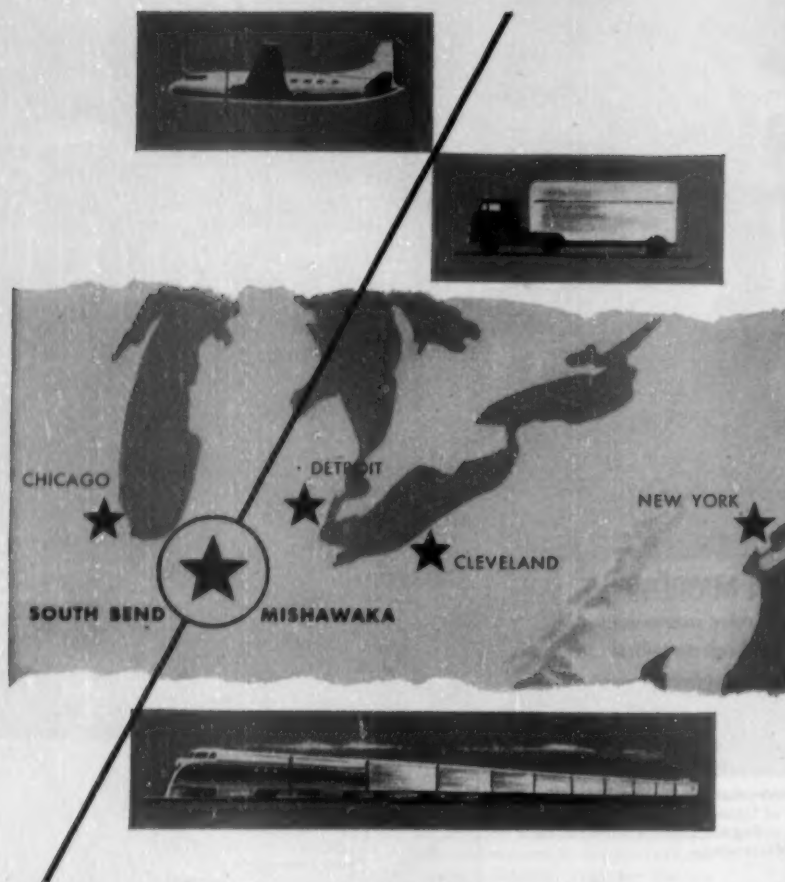


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Please send me your reprint describing Union Electric Microwave system, "Microwave Relieves Overcrowded Circuits."

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Company _____ Address _____
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☐ **Have an RCA representative get in touch with me.**



Main Line to Market, U.S.A.

Alongside your own shipping docks—if your plant is located in the South Bend-Mishawaka area—is a network of direct transport to the great national market. By rail, highway and air your products move to the richest parts of that market at costs in the lowest bracket.

The same network of economical transportation brings you raw materials, fabricated parts and sub-assemblies, produced right here in the nation's industrial center. You manufacture and market your products with the competitive advantage of lowest transport costs.

Five major railroads serve the area, which is astride the main axis from the midwest to New York, and less than 100 miles from the rail hub of the nation in Chicago. Sixty motor freight carriers provide service in every direction. Four major airlines operate 16 flights daily from a modern airport.

In the South Bend-Mishawaka area you're atop the ridge of maximum potential, as the economic geographers plot the national market—and in the very heart of the central market, richest by far of regional areas. Let us give you the figures.

We urgently solicit your inquiry about plant sites here—it will be held in strictest confidence. Write *Committee of 100*, Suite 310, National Bank Building, South Bend, Indiana.

SOUTH BEND and MISHAWAKA, INDIANA

COMMITTEE OF 100

buy it back when the customer has finished with it. That way the company has no responsibility if the ladder breaks.

The headaches run on and on. Some concerns—though not all—report bad experience with returns. Customers often keep tools longer than they expect, and throw the whole renting schedule out of kilter. A bad location can ruin an operation, too. Pick a heavily traveled route, yet close to homes, one man advises.

• **Expanding**—With experience, it's possible to build a large operation. Abbey Rents in Los Angeles is a good example. It has been renting hospital and party supplies for some 25 years, does about \$5-million to \$6-million a year in sales and rentals. During that time it has expanded, now has 25 branches. Thanks to its know-how, it thinks it can set up a franchise operation, spread out into some 200 towns around the country.

Does renting equipment help sales? It works the other way around, says Bechtel. You can't rent equipment until you have sold some; people won't rent a totally unfamiliar item. Emerson's TV color offer, of course, works just the other way; it aims to sell color eventually by renting out a new product.

On the other side of the fence, such concerns as GEE in Chicago are enthusiastic about the way sales are boomed by rentals. Nobody doubts that renting a floor polisher increases sales of floor wax; some stores, in fact, lend out equipment for free when the customer buys the wax and paint to do the job. GEE thinks renting does better than that; it sells the tools themselves.

One Cleveland company has its own sly methods of converting rentals into sales. It has found that professional men make good customers. When a doctor comes in to rent a tool, it sends him a new one—because he's more likely to wind up buying it. Some companies let the customer apply the rental to the purchase price.

• **Standing Alone**—The field is divided as to whether a rental business can stand on its own legs without a supplemental selling operation. Yet, with all the tribulations, rentals flourish. For in the last analysis, it's plus business. The articles rented are often articles no consumer would ever buy. Other articles he'll wind up buying.

Tool manufacturers back the trend enthusiastically. The one really sour note comes from the professional mechanic. Says a woodworking shop manager, "Who's going to hire a woodworker at \$3.50 an hour to make some kitchen cabinets? The homeowner will butcher the job, but he'll like it because he did it himself."

DA products . . . keyed to basic human needs



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GREAT STEP IN
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Dewey and Almy announces **"EVERFLEX G"**
...A new "latex" for paint manufacturers

Now Dewey and Almy, with the development of Everflex G, makes available to the emulsion paint manufacturer a polyvinyl acetate copolymer which does not require plasticizer addition. It permits lower costs because a compounding step is eliminated . . . and there is no separate plasticizer to migrate or be lost on long exposure.

Paints based on internally-plasticized Everflex G have excellent water and scrub resistance and excellent color retention. They are permanently flexible. They have superior adhesive properties. They have high oil resistance. Everflex G not only

overcomes many of the disadvantages of present day water base paint for interior uses, it extends the application of such paints to exterior use on masonry. Even the exterior painting of wooden structures is a distinct possibility! Several wooden buildings have been painted with exterior emulsion paint based on Everflex G, and early indications show great promise.

Everflex G is now being produced in commercial quantities. Inquiries from paint manufacturers are invited. Write or phone us today . . . or contact R. T. Vanderbilt Co., who markets this product to the paint industry as "NORVAN G".



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your supervisors
- *cut down*
employee grievances

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CANADIAN FARMERS visit Purina's research farm to learn about . . .



STEER'S STOMACH Worker lifts cover over a hole in the animal's side so that farmers can see the digestive system at work.

How Research Sells

Exactly 326 Canadian farmers traveled to Missouri last week to see what scientific farming could do for them. The farm is the huge, 723-acre Purina Research farm near St. Louis, where

Ralston Purina Co. puts its 100-odd livestock feeds to test. It also does breeding experiments, and a lot of basic research in ways to get more farm output for less cost. Cooperating on a



DUCK FOOD It takes one 20-lb. bag to get one duck ready for market now; 25 years ago, it took 30 lb. to 36 lb.



FRIED CHICKEN At the end of the two-day party, the farmers were treated to a dinner of—naturally—Purina-fed fowl.

Purina Feed to Farmers

more or less friendly basis with the researchers are some 25,000 creatures—both four-legged and winged.

Some of the guests came 1,500 miles to see the show. About 120 were

French-speaking farmers from the Province of Quebec; the rest were from Ontario. They came 'because' they wanted to come—badly enough to pay, out of their own pockets, the \$95 to

CARRIER ENGINEERED MEANS FOREMOST IN UNIT HEATERS



No matter how you say it, this powerful little propeller-fan type "heat shooter" is a matchless combination of COMPACTNESS and EFFICIENCY. . . . Just the thing for stores, restaurants, garages, service stations, vestibules and other interiors of limited space.

Carrier Gas-fired Unit Heater 46T50 is only 23 in. high, simple, rugged, exceptionally quiet, handsomely styled. It is AGA-approved for all types of gas—which is fired directly in a solidly welded heat exchanger whose tubes of ALUMINIZED STEEL are exclusively 16 gauge. This assures far longer life than ordinary furnace steel of heavier gauge.

More than a dozen other major mechanical and electrical features are ingeniously embodied to assure maximum efficiency, dependable operation, and controls that are either automatic or manually easy.

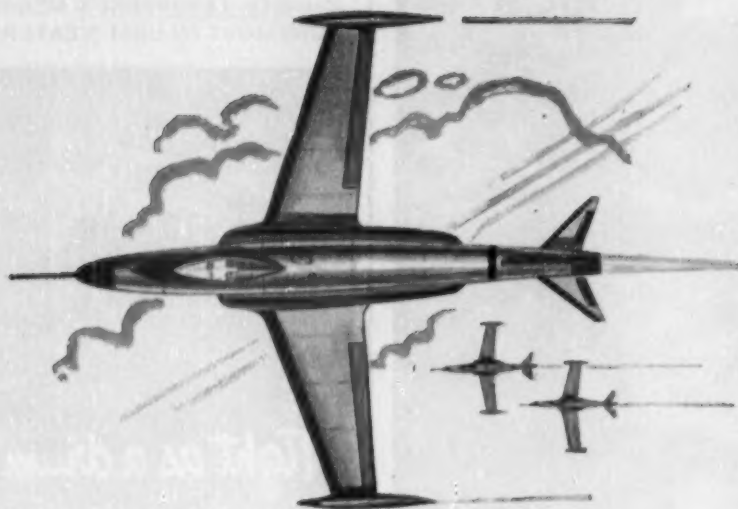
For further information call the Carrier representative in your Classified Telephone Directory, or write to Carrier Corporation, Syracuse, New York.



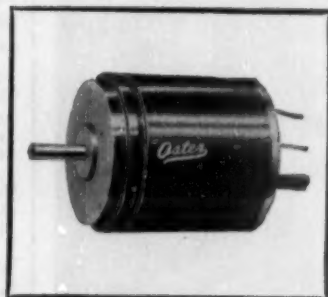
Carrier also manufactures a complete line of larger Gas-fired Unit Heaters in both propeller-fan and duct types, and in a wide range of capacities up to 250,000 Btu per hour input.



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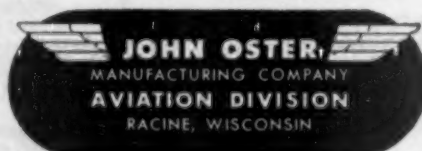
- Special motors of all types, such as servos for auto pilots, computers, fire control, for drives, blowers, and fans.
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- Tachometer generators.
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*You can depend on Oster for
superior quality that assures
SAFER FLIGHT, EXTRA FIGHT.*

It will pay you to contact us.



Known the world over for quality appliance products

"... each year the research farm convinces thousands that they can do it ..."

RESEARCH FARM starts on p. 48

\$120 that the two-day tour cost them.

Ralston Purina has good reason to encourage the 15,000 visitors who see its farm each year. No matter what miracles Purina scientists may turn up, its customers have to see to believe. Says R. E. Rowland, vice-president in charge of production and research: "The best salesman for Ralston Purina has been the research farm, which each year convinces thousands that they can do it, too."

• **Agenda**—In their carefully clocked visit, the farmers heard and saw plenty. They saw a hole that had been cut into a Hereford steer's stomach so that researchers could find out what's going on inside. They learned about the "milk replacer" that Purina has brought on the market—a substitute that can be fed to calves in place of cow's milk. The cow's milk, sold to consumers, brings the farmer twice as much per gallon as the cost of the replacer.

Tips on the care and feeding of animals include such items as these:

• Save the gilts (young female pigs) from good-natured sows for breeding; the gilts will grow up to be good-natured themselves—and cranky sows often crush their young.

• Keep your hogs cool. A hot hog won't eat so much.

• Add antibiotics to a hog's rations and you'll get a 210-pounder on 20 lb. less feed.

• **Figures**—Ralston Purina pounded its points home with a wide assortment of statistics.

Scientific care has raised the average milk output per cow from 6,800 lb. of milk a year to over 14,000 lb. One of Purina's cows, a 12-year-old, has produced 125,000 lb. of milk in her time.

On ducks, Ralston tells much the same story. It takes only eight weeks to raise a 6-lb. duck on 20 lb. of feed now; 25 years ago it took 30 lb. to 36 lb. and 12 to 14 weeks to get the same duck.

Ralston Purina figures its research program costs about 1¢ per bag of feed. It doesn't begrudge the money. That research has helped make it a leading name in feed products and pull its over-all sales up to around \$400-million. (Sales of Ralston's breakfast cereals account for only about 10% of the company's over-all volume.)

What its program means to the consumer was summed up by J. D. Sykes, vice-president: "Eggs would be costing \$2 a dozen today if 1920 production operations prevailed in the industry."

The farmers seemed to get the point.



Your HEART never takes a "holiday"

Think for a moment of the work of your heart. In one hour it beats well over 4,000 times and pumps over 200 gallons of blood throughout the body. On and on it works for you . . . with only a fraction of a second's rest between beats. In fact, the heart is one of the hardest-working organs in the body.

Since the heart can never take a "holiday," it is wise for everyone . . . especially those who have reached middle age . . . to observe certain rules of living that may help the heart by lightening its load.

1. Keep your weight down. As we grow older, the heart finds it harder to do the extra work which excess weight places on it. While a normal heart is handicapped by obesity, the burden of excess pounds may be a particularly serious hazard for the

heart that is impaired.

2. Make moderation the keynote of your daily living. When you rest, so does your heart. This is why sufficient sleep every night and plenty of relaxation are so important. You may help spare your heart possible strain if you avoid all excesses such as too much work under tension or strenuous exercise taken in "spurts."

3. Have all heart symptoms promptly investigated. Such symptoms as pain or a feeling of oppression in the chest, shortness of breath, rapid or irregular heartbeat cause untold worry and anxiety. While these symptoms may indicate heart trouble, they frequently are due to other causes and may be of little importance. Under any circumstances it is wise to have such symptoms

promptly checked by your doctor.

4. Do not neglect periodic medical examinations. Regular check-ups often reveal heart disorders in their earliest stages when the chances for control . . . and perhaps cure . . . are best. It is wise to have complete examinations yearly . . . or as often as the doctor recommends.

Although heart disease is a major health problem, important gains are being made against it. Methods of diagnosis have become more exact and means of controlling many heart conditions increasingly effective. As a result, more and more heart patients today can lead happy, useful lives . . . and frequently enjoy their full span of years.

"New Hope for Hearts" is a slogan which reflects the objectives of many research agencies, including the Life Insurance Medical Research Fund. The latter, supported by 146 Life Insurance Companies, devotes its entire research program to diseases of the heart and blood vessels.

Metropolitan Life
Insurance Company
(A MUTUAL COMPANY)

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Please send me the free booklet, 354S, "Your Heart."

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Now, there's over twice as much horsepower at "the top of the South" for the wheels of industry! VEPCO—serving most of Virginia and adjoining areas in North Carolina and West Virginia—has more than doubled its electric generating capacity within the last six years.

New industries, established industries wishing to expand, and those whose roots have been in the "top of the South"—have found that here Men, Materials and Markets team together for better production in a favorable climate, and where fine transportation provides ready access to the markets of the nation, and to those of the world through the unequalled ports of Hampton Roads.

Here, at the "top of the South," the people are really friendly to new and expanded industry for, with traditions going back to Colonial days, they know that more invested capital means greater opportunities for workers who realize what free American enterprise can do.

Our Area Development Department can help you find the location you want for your industry. We have the information on sites, natural advantages and technical details.

A letter, postal card or telephone call will start this confidential service to you.

Area Development Department
**VIRGINIA ELECTRIC
AND POWER COMPANY**
Richmond 9, Virginia



USED-CAR LOTS by sporting new cars helped bring on the . . .

War on Auto Bootlegging

The National Automobile Dealers Assn. is working hard to change the antitrust laws that make manufacturers afraid to clamp down on the practice.

"Brand-new 1954 models," the ads say. "Spanking clean. Low mileage."

Advertisements like this are appearing all over the country. At first glance, they seem like perfectly ordinary exhortations to the car-buying public. But when you read them through a second time, you find two things about them that may well mystify you:

- The prices are unusually low.
- The cars—1954 models—are being sold by used-car dealers.

To the uninitiated, this may seem like a strange state of affairs. What are these new cars doing on used-car lots? Where do they come from? What twist of the market allows them to be sold a hundred dollars or more below the rock-bottom new-car price?

The answers to these questions are wrapped up in a complicated market phenomenon known as auto bootlegging.

• **Easy Out**—Bootlegging has been a problem in the auto market for many years. In various forms, it flourishes in both good times and bad. Though neither manufacturers nor new-car dealers like it to flourish, it continues to do so because some very ticklish legal questions are involved.

But there are some changes in the air. This year, dealers are pressing manufacturers to come to grips with bootlegging—and perhaps conquer it at last.

• **Varieties**—The term "bootlegging," as usually applied in other fields of enterprise, carries a connotation of dishonesty. But in the auto market, dishonesty may not be involved at all. In at least one of its forms, auto bootlegging may represent merely a last-ditch stand by a legitimate dealer.

This dealer, a new-car man, finds himself overloaded with cars. Looking around at his local market, he feels certain that he won't find enough customers to take the cars off his hands.

His dilemma is solved by a used-car dealer, who agrees to buy up the surplus new cars. The used-car man pays wholesale price for them, or a little more—thus relieving the new-car man of a possible loss. Then he takes them to his own lot. Since he has far less overhead to support than a new-car dealer, he can shave at least \$100—often more—off the going price for new cars of that particular make and model.

It goes without saying that this hurts new-car dealers operating in the vicinity of the used-car man. Faced by that kind of price competition, they may be forced to do some bootlegging of their own. The trouble spreads; and once it has started growing, practically nothing can stop it.

• **The Law**—Actually, no one involved in this kind of bootlegging has done anything that can be called illegal. There is nothing in the new-car dealer's franchise agreement that specifically forbids him to sell his surplus to a used-car man.

The franchise agreement is the nub of the whole problem. Before World War II, the manufacturer-dealer agreements contained a clause that, in effect, forbade bootlegging. The clause said that a dealer couldn't sell a new car for resale to any other dealer, unless the other dealer was also authorized by the manufacturer to sell that particular make of car.

This clause drew frowns from the government's antitrust attorneys. It was quietly dropped from the contracts

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You find Fridens everywhere in business. Because the Friden performs more steps in figure-work *without operator decisions* than any other calculating machine ever developed. Each automatic Friden decision reduces business overhead costs by saving human time.

It's likely your business can't afford NOT to own a Friden. See what you think when you see the Friden figure-think. Call in your nearby Friden Man and watch a demonstration! Friden sales, instruction and service available throughout the U.S. and the world. FRIDEN CALCULATING MACHINE CO., INC., San Leandro, California.



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MILK PLANTS

...handle milk check register calculations swiftly with the fully automatic Friden Calculator, also figure farmers' payrolls, drivers' load sheets, cost proration, discounts. *Time-savings pay back quickly the cost of a Friden!*



Friden builds calculators in a wide price range, in every size, for every figuring need

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It takes a letter on paper made with new cotton fibers to make the favorable impression you require. And only paper made with new cotton fibers, paper with the *fact* and *feel* of quality, will do this for you.

One of the least expensive such fine papers is Parsons Heritage Bond.

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Parsons Paper COMPANY
OVER 100 YEARS AT HOLYOKE, MASSACHUSETTS

after the 1949 Supreme Court decision against exclusive dealing in the Standard Oil Co. of California case (BW—Jun. 18 '49, p21).

• **Action**—Now, new-car dealers want the clause, or something that will have the same effect, reinstated. Attorneys of the National Automobile Dealers Assn. have been talking to Dept. of Justice lawyers and to company attorneys, trying to find a weapon that manufacturers can use against bootlegging without running afoul of the antitrust laws.

This week, in a bulletin to its members, NADA said: "The next phase will be action by manufacturers and government. . . . There are laws and regulations that need revision and re-interpretation."

The laws to which NADA refers, of course, are the antitrust laws. If it can get the manufacturers on its side, and if it can persuade the government to make an antibootlegging clause legal, the problem of bootlegging will be fairly well solved.

• **Hanging Back**—Getting the manufacturers on NADA's side is not so simple as it sounds. Though Detroit's car makers don't approve of bootlegging, they're afraid that almost any move they make might run them into legal trouble. Even getting together to discuss the situation might later be construed as conspiracy.

Many dealers say that, until this year, manufacturers haven't even been interested in the bootlegging problem. A car is paid for before it leaves the factory gates, these dealers point out; hence, why should the manufacturer care what happens to the car after that?

This year, however, manufacturers have become worried about the value of their dealer franchises. As bootlegging spreads, many a new-car dealer might take to selling bootlegged cars himself—just to protect himself. The specter of one dealer selling several makes of new cars is a nightmare to manufacturers. In a situation like that, the dealer franchise would be merely a piece of paper—worth hardly anything.

• **Letters**—With this nightmare before them, manufacturers are ready to come to grips with bootlegging—even if it means walking into a legal thornpatch. Both Ford Motor Co. and General Motors Corp. have written letters to their dealers on the subject.

Ford's letter was blunt and to the point.

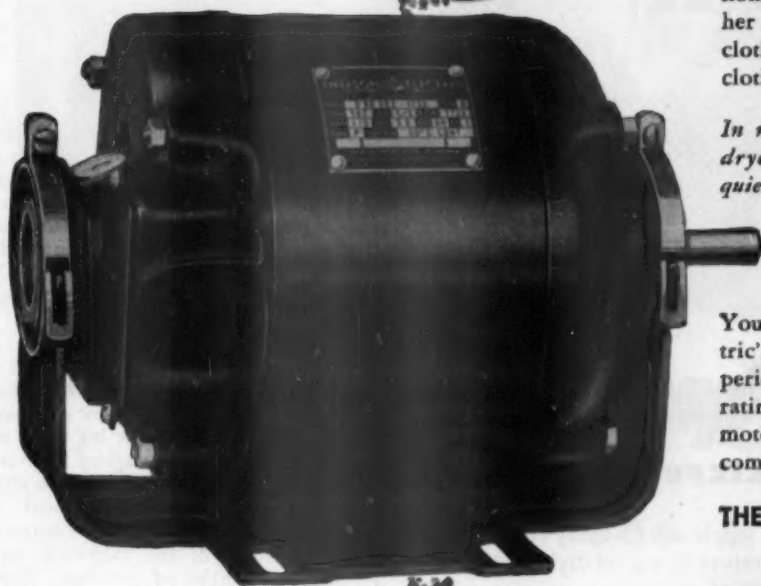
GM's letter showed the results of a long and careful study by the company's legal department: "It is not unreasonable to suspect that the dealer who indulges in such a practice may not be fulfilling his contractual obligation to maintain an adequate sales staff and a selling and customer relations organization adequate to take care of



music to her ears!

A sweet note to the ears of the modern homemaker is the low, efficient hum of her automatic clothes dryer. Clothes lines, clothes pins and a damp basement full of clothes are no longer necessary.

In many of America's best known clothes dryers, an Emerson-Electric motor works quietly and efficiently.



You, too, can benefit from Emerson-Electric's 63 years of motor manufacturing experience. If you require standard motors in ratings from 1/20 to 5 h.p., or hermetic motors from 1/8 to 20 h.p., write for complete information.

THE EMERSON ELECTRIC MFG., CO.
St Louis 21, Mo.

Write for these Emerson-Electric Motor Data Bulletins



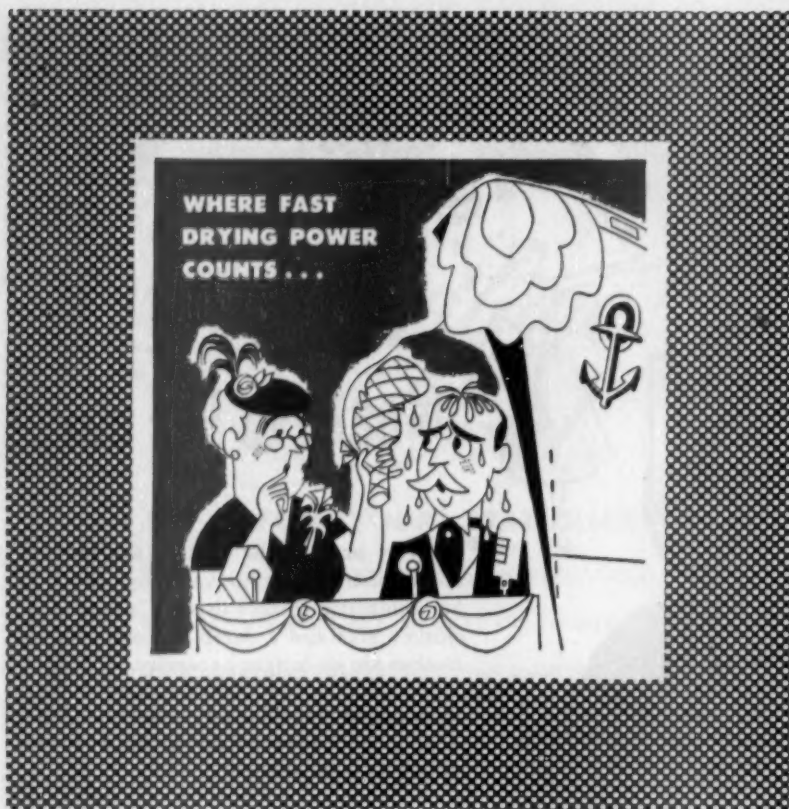
Manufacturers requiring motors 1/20 to 5 h.p. can profitably use these reference guides. Specifications, construction and performance data are included for these motors:

- | | |
|--|---|
| <input type="checkbox"/> 480-A Capacitor-Start | <input type="checkbox"/> 480-E Oil-Burner |
| <input type="checkbox"/> 480-B Split-Phase | <input type="checkbox"/> 480-F Jet Pump |
| <input type="checkbox"/> 480-C Integral | <input type="checkbox"/> 480-G Blower |
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For 35 Years Manufacturers of Quality
Towels, Toilet Tissue and Paper Napkins

FORT HOWARD PAPER COMPANY
Green Bay, Wisconsin

the sales potential of the area described in his selling agreement."

• **Your Own House**—While dealers admit that much bootlegging originates with them, and are willing to do what they can to stop it, they advise Detroit to put its own house in order as well. They refer to the lists maintained by manufacturers of companies entitled to "fleet discounts." These are companies—many of them car rental agencies—that buy more than a specified number (usually 25) of vehicles a year. The overwhelming majority of these companies are honest. But some of them, dealers say, purposely buy more cars than they need. These companies then resell the surplus cars to used-car dealers for a profit.

Dealers want the manufacturers to review their fleet discount lists carefully. If a company is caught reselling its fleet cars, the dealers say, strike it off the list.

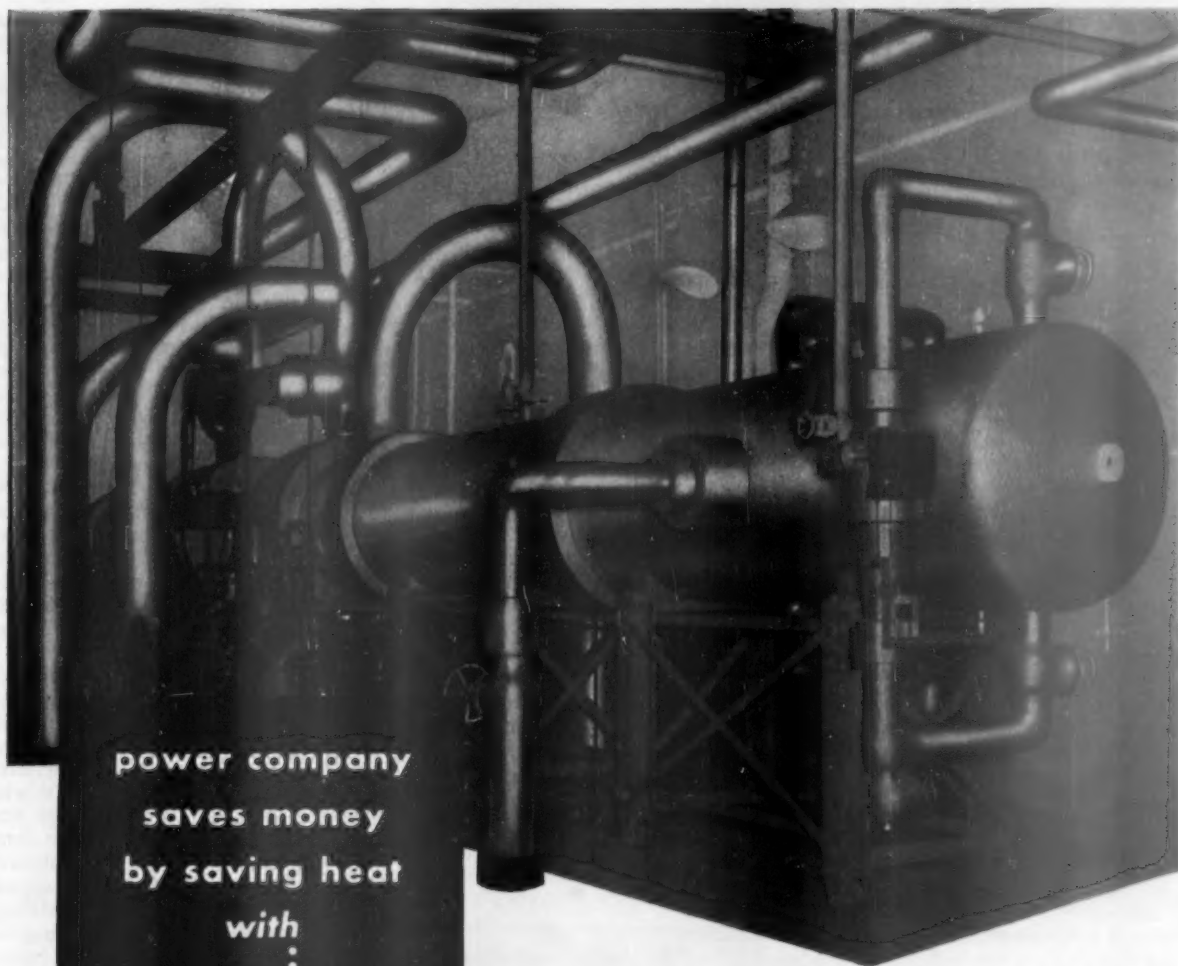
TV Show Sells Dealers and Public

Speedway Petroleum Corp., a fast-moving chain of 750 service stations in Ohio and Michigan, has picked up the TV sales meeting idea and added a new twist. Instead of using a closed circuit, it bought an hour of time on a regular commercial station, WWJ-TV in Detroit, to introduce its new Multipropyl phosphate gas to its dealers.

The show, telecast from 11 p.m. to midnight on a Saturday, also served as a public announcement. What the dealers and the public saw was an hour's variety show. There were big name entertainers (Frances Langford was one of them). Dr. Jerry Sevick, of the physics and electronics department of Wayne University, gave a scientific demonstration of the antiknock, anti-carbon properties of the fuel. Sandwiched in between was a thorough briefing on the company's advertising and promotion plans for its Multipropyl phosphate gas.

Speedway alerted all its dealers in the WWJ-TV area before the show. The dealers held parties in their homes the night of the show for some 2,000 guests.

• **Will FCC Go Along?**—The Speedway show raises a big question: What attitude will the Federal Communications Commission take toward this sort of program? Advertising agency, W. B. Doner Co. of Detroit, says that the show lived up to FCC standards because Sevick's presentation was "educational" in nature. But in general, this alone might not get a program past FCC, which uses the test of whether or not the entertainment feature was the principal one.



power company
saves money
by saving heat
with
...

Steam heater insulated with "Featherweight" 85% Magnesia blocks and K&M asbestos cement. Meramec Power Plant, Union Electric Co., St. Louis, Mo. Insulation Contractor: Armstrong Cork Company

"Featherweight" 85% MAGNESIA

In Union Electric Company's Meramec Power Plant, "Featherweight" 85% Magnesia was used to insulate the steam heater pictured above. Such an application is a typical one for dependable "Featherweight."

By itself this material (85% basic carbonate of Magnesia and asbestos fiber) is effective on piping and equipment with temperatures up to 600° F. Used with K&M Hy-Temp Insulation (diatomaceous silica), its range is extended to 1900° F.

Hy-Temp is applied directly to the hot surface, and "Featherweight" is used as the second layer. The two insulations are applied with staggered

vertical and horizontal joints—thus eliminating heat loss which occurs on single layer installations when the expansion of hot piping and equipment causes the joints to open.

This K&M combination insulation will last the life of the equipment it serves, will withstand moisture, alternate heating and cooling, wetting and drying. Both materials are supplied in various sizes and thicknesses.

Your K&M distributor is an experienced applicator who will gladly give you more information about these heat-saving, money-saving K&M insulations. Or write directly to us.

KEASBEY & MATTISON COMPANY • AMBLER • PENNSYLVANIA

Nature made asbestos . . . Keasbey & Mattison has made it serve mankind since 1873

In Canada: Atlas Asbestos Co., Ltd., Montreal, Toronto, Winnipeg, Vancouver



Rx for Depression Psychosis

The Advertising Council will try to allay fears by plugging the basic strength of the economy . . . Whiskey distillers rid of their surplus one way or another . . . Replacement market a major factor in appliance business.

The Advertising Council is putting \$100,000 behind an effort to bolster confidence in the strength of the U.S. economy. That's the sum it will spend on its antigloom campaign, announced last week in Washington by Paul G. Hoffman, chairman of the council's Public Policy Committee.

Hoffman said that his committee knew that the nation can't "smile itself out of trouble." He felt, though, that the campaign can help people to understand that there's no reason why 1954 shouldn't be a good year. Hoffman further thought that for anyone to be downhearted about the long economic pull in the face of the facts—which the Ad Council will play up in the campaign—is "ridiculous."

The Ad Council is the natural organization to run such a campaign. It is the war-born group that came into being to mobilize the advertising business' efforts in helping the government find scrap iron, get blood plasma, stop loose wartime talk. Since the war it has backed religion and brotherhood, campaigned against forest fires, and furthered other worthy causes (BW-Oct. 11'52, p136).

• **Donations**—In this campaign the council is getting the help of McCann-Erickson, Inc., which will donate its services in preparing ads and copy on The Future of America. The council will use everything from television to car cards to tell people about the changes of the past 50 years—and the economic needs these changes have created. (The space that will be donated by media will amount to many times the \$100,000 being spent by the Ad Council on materials.)

Hoffman maintains that the present downturn rises from the gap between manufacturing facilities in durable goods and the merchandising facilities to move these goods. To restore the balance, we need more and better salesmen, more imagination in sales promotion, more and better advertising. Hoffman, for example, will urge his own corporation—Studebaker—to spend \$335,000 in advertising next month, though he can't justify that much on the business outlook alone.

Whiskey Shrinks

Whiskey distillers didn't get the tax

relief they wanted. The Senate Finance Committee killed for this session the Saylor bill, which would have allowed distillers to hold whiskey 12 years instead of eight before they had to pay taxes on it. Yet, oddly, the distillers' dire forecasts of distress whiskey flooding the market haven't materialized.

What happened is that the companies found ways to divert their surplus stocks. They exported some 2.6-million gal., mostly to Canada. Another 2.6-million gal. went to bonded warehouses for export later. Probably 5-million gal. were redistilled into grain neutral spirits. Evaporation took care of a fat 24.5-million gal. And of course they sold a lot—75.5-million gal.

The net result was this. Whiskey production during 1953 was some 91-million gal. against 1952's 78-million. Yet distillers wound up 1953 with only 716-million gal. in stock against 735-million at 1952's yearend—without benefit of a big increase in liquor consumption.

New buyers account for a decreasing share of electrical appliance purchases

	1947	1950	1953
Refrigerators	74.6%	47.9%	25.4%
Vacuum cleaners	50.9	43.1	27.9
Washers	66.2	40.6	28.4
Ranges	81.7	62.2	55.9

See Electrical Merchandising

The Trade-In Grows Up

The table above has a growing importance for the appliance industry. It is based on this year's annual study of the replacement and trade-in business just published by Electrical Merchandising, a McGraw-Hill publication.

The percentage of new appliances bought by families who are coming into the major appliance market for the first time has been diminishing steadily since the end of World War II. Most of the new refrigerators, washing machines, and vacuum cleaners are now bought by people who already have those appliances and who for one reason

or another want to replace the old ones.

This trend is having several major consequences.

To retailers: It means that trade-ins have become a highly important factor in their business. Most of the people who replace their refrigerators and washers, for example, trade in old machines. The percentage of retail business involving trade-ins last year on refrigerators was 47%, on washers 54.5%, on vacuum cleaners 26.7%, on ranges 27.8%.

Comments Electrical Merchandising: "No single factor in the electrical appliance business for 1954 affects so greatly his chances of operating profitably as his ability to accept used merchandise in trade without losing his profit on the new appliance sale."

To manufacturers: It means that more and more ingenuity must be used to create new gimmicks and new models that will interest the customers enough to trade in their old appliances for new ones. In other words, manufacturers must bend every effort to the creation of obsolescence.

The industry depends on two big factors—new models and new population—to beat the old bugaboo of "saturation," which is trade lingo for the theoretical point at which you have sold appliances to all the people who want to buy them. But the high percentage of replacement buyers as compared to new buyers in some appliances may make the industry take a second look at the estimate of this ceiling. With the leveling off of income gains by the lower income groups, new buyers will no longer enter the market in large numbers.

MARKETING BRIEFS

New king-size filter-tip cigarettes are being put on the market by: (1) R. J. Reynolds (Camels), with a new entry called Winston, and (2) Riggio Tobacco (Regents), whose candidate is named Cort. These will compete with Benson & Hedges' (now Philip Morris') Parliament and Brown & Williamson's Viceroy.

Price of I. W. Harper has been dropped by Schenley from \$7.35 a fifth to \$6.56 (New York price). This brings it in line with Old Forester, Old Grand-Dad, other high-quality bonded bourbons.

Schwegmann Bros., the New Orleans supermarket that fought the fair trade laws to the Supreme Court twice, has been charged with contempt of court by a drug house, Hoffman-La Roche. The charge: that Schwegmann undercut the price of Gantrisin and other fair-traded Hoffman-La Roche products when under injunction not to do so.

The Last Roadblock to Color Television is Gone!

Over recent years the headlines have been full of statements that the beauty, richness, and realism of natural color would shortly reach an eager television public.

In 1953 a united industry announced a system of color television by which existing black-and-white sets could receive color transmissions in black-and-white, and color sets could receive black-and-white broadcasts as well as color transmissions.

That proposal has received the "green light" from Washington for commercial broadcasts.

Unfortunately, the public, which has learned to prefer large pictures, has been given the impression that the best receivers they can expect for some time to come will provide only a 12½" picture and at surprisingly high prices.

This impression is wrong.

The last roadblock IS gone!

Before the end of 1954, receivers capable of receiving color or black-and-white will be available with popular size picture tubes—including 21" and 24"—at prices far less than for similar size sets at the inception of commercial broadcasts in black-and-white.

The tricolor cathode ray tube which removes the last roadblock was invented by Dr. Ernest O. Lawrence, whose concept is as simple and fundamental as was his history-making earlier invention, the cyclotron, first of the famous atom smashing machines.

His unusual electromagnetic concepts make possible a tube which is easy to manufacture in large sizes, uses single gun black-and-white tube techniques, has accuracy of color values and high definition.

Additionally, it has been discovered that this simple and flexible instrument will perform other functions of a television receiver besides color display, thereby decreasing set cost.

Dr. Lawrence has gathered around him a staff of unusual scientists to assure further improvement of the tube and reduction of cost.



Production model Lawrence 21" all-glass tube—easily mass-produced with existing equipment—only 22" long.

When black-and-white television started, the cost of television receivers with seven and ten inch tubes was high, and broadcasts were infrequent. This did not hinder a rapid increase in sales of black-and-white sets. With sets of acceptable sizes available, the increase in production and sale of color sets will be likewise rapid.

Issuance of licenses to tube manufacturers for production of Lawrence Tubes is under way. Completed tubes have been supplied to all important television set manufacturers.

You'll be hearing more and more about these unusual 21" and 24" Lawrence Tubes.

Television can now take its rightful place as the most gloriously satisfying form of home entertainment and culture ever devised by the genius of man.

For a booklet explaining the Lawrence Tube in detail, write to:

CHROMATIC

TELEVISION LABORATORIES, INC.

1501 Broadway, New York 36, New York • 703 37th Avenue, Oakland 1, California

FINANCE



11:51 A.M. Blyth & Co.'s R. George LeVind (left, standing) tells a huddle of securities dealers that their "dealer group" has outbid opposing groups for \$107.5-million worth of a big offering of public housing bonds. The dealer group—headed by New York investment bankers Blyth & Co., Phelps, Fenn & Co., and Lehman Bros.—operates from a specially rigged room called Housing Headquarters in Lehman's William Street office. The group concentrates on the multimillion-dollar housing issues floated under the aegis of the Public Housing Administration. Once the results of the competitive bidding are known, the groups' 184 members swing into the marketing operation.



11:57 Dealers break from huddle, phone home offices, which already have price-yield scales bid for the 15 issues.



12:21 Orders start coming in. The shorter maturities of well-known localities go first; the others take some selling.

How Wall Street

One morning last week, a few minutes before noon, representatives of housing authorities in Detroit, San Francisco, Paterson (N. J.), Mayaguez (Puerto Rico), and 13 other widely scattered cities and counties ripped open sealed envelopes. The envelopes contained bids of banks and investment houses who wanted to underwrite the bonds of 17 housing authorities, totaling \$119-million in government-backed, tax-exempt securities.

It was one of the last links in the chain by which housing authorities



12:10 Teletypes relay price-yield information to dealers scattered all over the country. Then the machines are cleared to await incoming orders.



12:55 Advertisements in tomorrow's papers will play up the advantages in buying the tax-exempt bonds. LeVind (right) and adman work on potential sales pitch.



Swings a Housing Bond Issue

sell bonds to get the money for new construction. Rather than depend solely on local backing, they take their financing problems to the Public Housing Administration in Washington, which in turn gives investment houses and banks all over the country a chance to bid competitively for the right to take over the issues and reoffer them to the public. All bids must be in on a specified date. Local authorities open them all at the same time and, of course, go along with the highest bidder. This way, a New York bank, for

example, may finance a housing project in Arkansas.

• **The Winner**—The appointed hour for opening the bids finds the investment houses and banks that have submitted bids in a state of excitement. Any minute a phone call may announce the winner.

The excitement over last week's bids was probably highest at 1 William St., downtown New York home of Lehman Bros., investment bankers. There, on the 11th floor in what is called Housing Headquarters, 50 securities dealers were

2:45 "A \$2½-million order just came in from one of the big savings banks. . . . The Pennsylvania bonds are moving pretty well." Lehman Bros.' Frank Morse (left) and O. S. Brewer of Phelps, Fenn review the few hours of trading. There was plenty to be happy about: \$50-million of the bonds went by 3 p.m.

Another **ROCHESTER PRODUCTS**
STEEL
GM Tubing
ENGINEERING ACHIEVEMENT



NEW TUBULAR GEAR SHIFT ROD

► CUTS WEIGHT **53%**
...Yet Meets All
Durability Requirements
► LOWERS COSTS

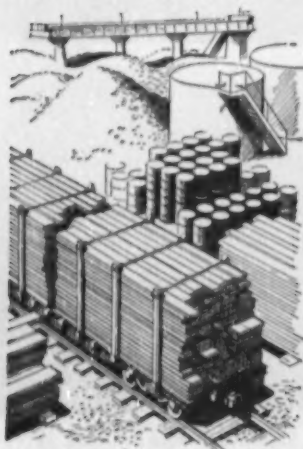
Perhaps you'd never think of building a gear shift rod from tubing... but Rochester Products did. The result is an ingeniously designed, soundly engineered GM Steel Tubing rod that will stand up under all conditions—yet weighs less than half as much as ordinary rods. Best of all, it **COSTS LESS!**

Here is one more example of how Rochester Products engineers are combining ideas, skill, experience and GM Steel Tubing to help hundreds of industries build better products for less money. We can help you, too!

ROCHESTER PRODUCTS
DIVISION OF GENERAL MOTORS
ROCHESTER, N. Y., U. S. A.



Raw materials were this plant's big location problem...WHAT'S YOURS?



Finding a new location near basic raw materials—and within economical shipping distance of other supplies—is often a difficult task. Yet a manufacturer of electronic tubes who needed a site in the northeast market close to sources of glass sands and natural gas had no trouble with this problem.

He got comprehensive information on the availability and cost of these raw materials at several desirable locations—within a short time—from the Industrial Location Service of the State of New York. With this data, it was easy for him to select the right location.

GET FREE BROCHURE: "Industrial Location Services." Also detailed physical map of N. Y. State. Write New York State Department of Commerce, Room 749, 112 State St., Albany 7, New York.



**Industrial Location Service of
New York State**

"WE DON'T SELL SITES—WE MATCH NEEDS"

gathered to hear that their group-headed by Blyth & Co., Inc., Phelps, Fenn & Co., and Lehman Bros.—had bid successfully on \$107.5-million of the bonds, winning all but two of the 17 issues. As soon as the price of the bonds was announced, the successful dealers scattered to the many phones, confirmed the price scale and yields on the various maturities with their main offices, then sat back to take orders. As one broker said, "it operates like a miniature stock exchange."

• **Orders Pour In**—The orders weren't long coming, either. Banks, insurance companies, pension funds, and wealthy individuals are especially eager to hold such bonds, particularly the shorter maturities. The bonds are exempt from federal taxes (the Mayaguez bonds are also exempt from local taxes), are backed by the federal credit. This backing comes through annual contributions by the Public Housing Administration to the local authorities, guaranteed to cover principal as well as interest payments on the bonds.

The tax-exempt privilege is an overriding factor in demand for the bonds. If, for instance, you have \$20,000-22,000 per year in taxable income, a 2.25% yield in tax exempts is equal to a 5.11% yield from taxable securities. The spread widens as you go up the income scale.

• **Competitors**—Wall Street's underwriters are always eager to handle this sort of high-grade merchandise. And so competition for the housing issues is keen. The huge syndicate centered around Blyth, Phelps, Fenn, and Lehman, which is called the "dealer group," has been opposed since last August by a "banker-dealer group" headed by New York's Bankers Trust Co. From the time the dealer group made its first bid in 1949 until last August, a bankers' group headed by Chemical Bank & Trust Co., also of Manhattan, had competed with it for housing bonds. But, as one banker put it, "they competed very unsuccessfully," and the original group was disbanded. (Since 1949, 75% of all housing bonds has gone to the dealer group.)

Besides these two major groups, occasional interlopers arise, usually bidding on a few particular issues. In the latest offering, for instance, a group headed by the Bank of America, of San Francisco, the nation's largest bank, submitted the successful bid for \$8.7-million of San Francisco bonds—becoming the first "third party" to garner any of the securities. The banker-dealer group bid on \$89.2-million of the issues, but was successful only on their bid for \$2.8-million of Somerville (Mass.) bonds. Another group, headed by Wall Street's Laidlaw & Co., bid unsuccessfully on three Pennsylvania housing issues.

• **A New Note**—The Public Housing

L. M. Muchmer
Wyomissing, Pa.

S. C. Hunter
Minneapolis, Minn.

A. J. Dukett
Atlanta, Ga.

R. B. Clifford
Battle Creek, Mich.

SAVE YOUR ROOF and YOUR DOLLARS

by a TREMCO MAN* early spring inspection



Cut Maintenance Costs by Correcting Roof Troubles while they are small

It's never too soon to look at your roof...even today, with snow perhaps still on it. Early spring inspection by Tremco Man George Butler for the Fred Robel Construction Co., Johnstown, Pa., revealed impaired flashings which allowed water seepage and frost damage.

This emergency was met, and a low cost, efficient method adopted for removal of a false deck, filling of low areas with Mulsomastic, installation of new flashings and resaturation of the roof mat. Leakage was stopped in time, and minor damage prevented from becoming major failure.

**THE TREMCO MAN CAN HELP YOU
SOLVE PROBLEMS INVOLVING**

R. M. Mehl
Buffalo, N. Y.

G. A. Butler
Altoona, Pa.

*TREMCO MAN EXPERIENCE

This story is typical of every Tremco Man's ability to keep roof maintenance costs low. Backed by a quarter century's experience, the Tremco Man:

1. Inspects *all* roof areas to locate danger points.
2. Recommends methods and products for solving roof problems—and a planned program for preventing future roof deterioration.
3. Instructs your maintenance crew, offers mechanized equipment, or recommends a reliable contractor.


The Tremco Man's services are available without obligation. Write today for your free copy of "Solving Roof Problems."

THE TREMCO MANUFACTURING CO.
Cleveland, Ohio


THE TREMCO MFG. CO. (CANADA) LTD.
Leaside, Toronto, Ontario


TREMCO

PRODUCTS AND METHODS FOR BUILDING
MAINTENANCE & CONSTRUCTION

ROOFS 

PAINTING 

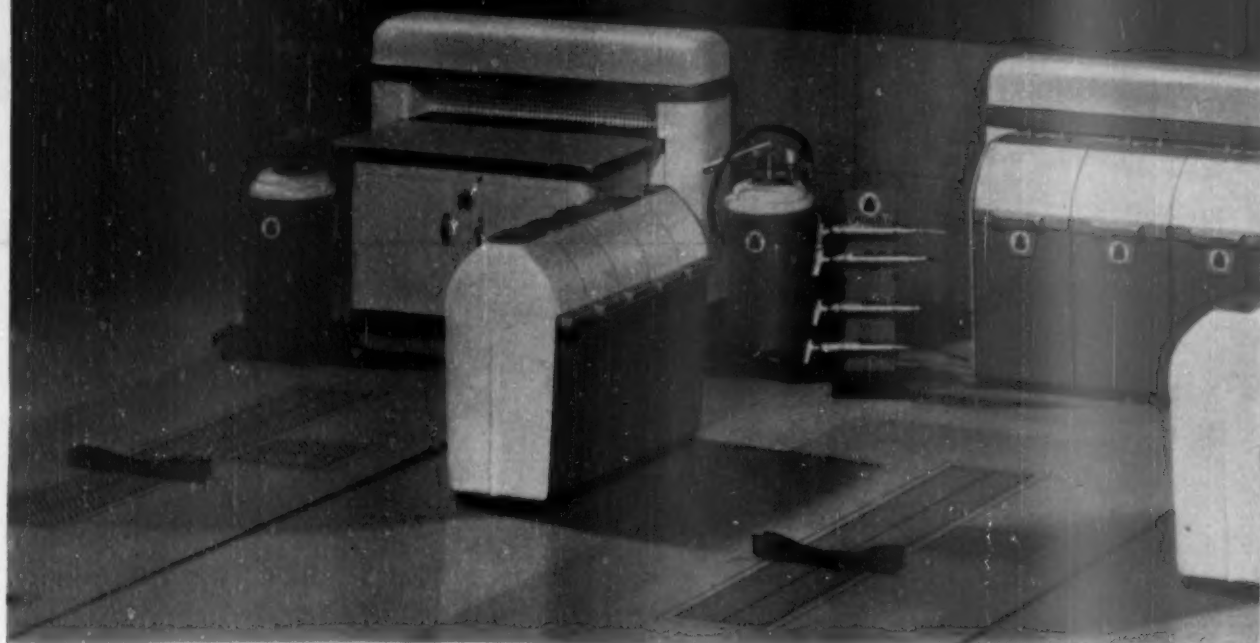
SASH 

FLOORS 

WATER REPELLENCE 

Photography shows prospects

how their new service stations are going
to look and operate



**Alemite sets up scale models of their
service station equipment on the customer's own
floor plan—photographs them—and portrays
the new custom-built station ready for action**

Salesmen can't pull lube racks, grease pumps and other service station equipment out of a sample case for display. They're far too big—far too bulky. Besides final location and arrangement count heavily in how well they will work out.

The Alemite Division of Stewart-Warner solves the problem with photography. Prospects see new service station equipment virtually right in their own premises.

It works this way. The salesman sends in a rough sketch of the space available with windows

and columns marked. Experts fit exact replicas of racks, lifts, and other equipment to the plan, then put the camera to work. The customer pictures his new station—modern, efficient, handsome—and the sale is well on its way. It's an idea for any company with bulky products to sell.

Photography is a great salesman for any business large or small. And it's very much more. It works in all kinds of ways to save time, cut costs, reduce error, and improve production. It can help your business too. Check over the list and see.

Eastman Kodak Company, Rochester 4, N. Y.

Kodak

... and here are 16 basic places where photography can work for you
... 5 minutes with this checklist can be the soundest business move you've made this year

- ☐ **Management** • Progress photos • Stockholder reports • Record preservation • Control charts • Organization charts
- ☐ **Administration** • File debulking • Purchase schedule • Office layout • Interior decoration • Form printing
- ☐ **Public Relations** • News releases • Institutional • Community relations • Public service
- ☐ **Personnel** • Identification photos • Job descriptions • Orientation • Payroll records • Employee personal records • House organs • Health records • Bulletins
- ☐ **Training and Safety** • Safety campaigns • Teaching • Maintenance • Reports • Fire prevention
- ☐ **Purchasing** • Schedules • Duplicate engineering prints • Specifications • Source information
- ☐ **Sales** • Portfolios • Dealer helps • Sales talks • Price & delivery information
- ☐ **Research** • Reports • Flow studies • Process charts • Library • Photomicrography, electron-micrography, x-ray diffraction, etc.
- ☐ **Service** • Manuals • Parts lists • Installation photos • Training helps • Records
- ☐ **Advertising** • Advertisements • Booklets • Displays • Dealer promotion • Television
- ☐ **Engineering** • Drawings • Specification sheets • Drawing protection • Pilot radiography
- ☐ **Warehousing & Distribution** • Inventory control • Damage records • Waybill duplicates • Flow layouts • Packing & loading records
- ☐ **Production** • Time study • Work methods • Legible drawings • Schedules • Process records
- ☐ **Testing & Quality Control** • Test setups • Standards library • Radiography • Instrument recording
- ☐ **Product Design & Development** • Styling • Consumer testing • Motion studies • Stress analysis • Performance studies
- ☐ **Plant Engineering & Maintenance** • Plant layout • Repair proposals • Piping & wiring installations • Progressive maintenance • Record debulking



Send for free booklet.
"Photography U.S.A."
 illustrates how photography
 is working in industry today.
 Write for a free copy.

American Credit Insurance

Keeps Credit Costs

Primary!

1. Helps avoid secondary credit costs.
2. Protects working capital invested in Receivables.
3. Provides endorsement for borrowing purposes.
4. Backs judgement of Credit Executive.
5. Gives positive loss prevention.
6. Harmonizes Credit-Sales relations.
7. Promotes efficiency in organization.
8. Creates confidence—basis of all credit.
9. Provides service for handling collections.
10. Minimizes risk and anxiety, promotes planning.
11. Endorses customer's promise to pay.
12. Gives Accounts Receivable real value.
13. Provides accurate cost basis of shipments.

For booklet, write Dept 42, First National Bank Building, Baltimore 2, Md.

**American Credit
Indemnity Company**
of New York

Administration has been handling the bond bidding ever since the Housing Act of 1949 was passed. At that time, the dealers' syndicate, with Blyth, Lehman, and Phelps, Fenn as the three principal managers, was formed. The three rotate leadership on each offering. The group also has six co-managers: Goldman, Sachs; Harriman Ripley; Smith, Barney; Shields & Co.; The First Boston Corp.; and R. W. Pressprich. Today there are 184 members of the syndicate all over the country, while the group headed by Bankers Trust had only 27 members for this latest bond sale.

• **Setup**—In preparation for the syndicate's first marketing operation, Lehman Bros. set up Housing Headquarters specifically for the purpose. More phones were brought in, with a separate switchboard; teletypes were installed; and IBM equipment to keep tabs on the complex bookkeeping was set up.

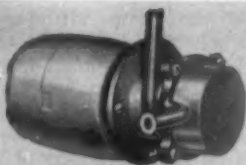
Then a long series of rehearsals started. Members of the syndicate augmented Lehman's own personnel, and the group was trained to run the housing issues through smoothly and quickly. Several dry runs of bond issues were made, complete with planted mistakes to see how readily foul-ups could be untangled.

• **Case History**—The efficient handling of this latest issue, the ninth huge offering since 1949, attests to how well the system works. Here's how the procedure ran on the latest issue:

When PHA announced that a \$119-million housing bond issue would be marketed on Mar. 2, the three principal managers of the dealer group got together with the six co-managers and other syndicate members for preliminary meetings on prices for the various issues. Different ideas were kicked around up until the final price meeting the day before the sale. This meeting was broken into two groups, one for those members with a $\frac{1}{4}$ to $\frac{3}{4}$ of 1% participation in the issue, and another for those with $\frac{1}{4}$ of 1% or more participation.

Prices depend on several factors: prices of government bonds (the cornerstone of the money rate structure), current prices of outstanding housing bonds of comparable maturities, and, most important, on the interest evinced before the sale by customers of syndicate members. This interest is measured by a systematic sounding out of insurance companies, banks, and other large institutional investors.

On the basis of this analysis and a final check on the latest market prices, bids were submitted to the various authorities at the "last minute," which is usually about an hour or two before they are slated to be opened. The bids were phoned and teletyped from



Moyno designed for pumping ethylene glycol, condensate from automatic driers, hot and cold water in dishwashers.



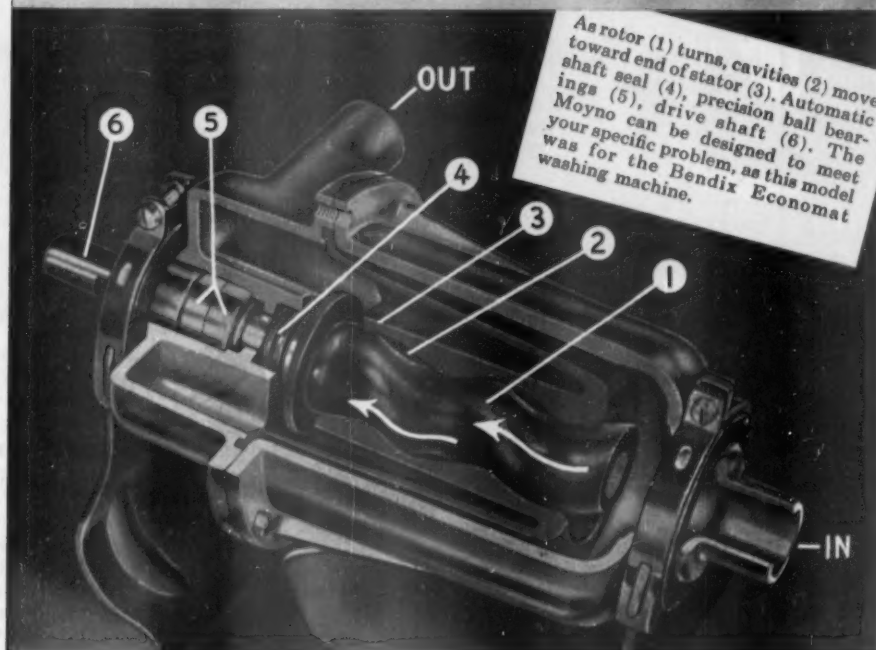
General purpose Moyno for pumping oils, water, alcohols and caustics.



Bronze and stainless steel Moyno as used in a drink dispenser. Pumps water at more than 100 p.s.i.g.



Here's a compact version of a low head, small displacement Moyno for accurate pumping of small amounts.



As rotor (1) turns, cavities (2) move toward end of stator (3). Automatic shaft seal (4), precision ball bearings (5), drive shaft (6). The Moyno can be designed to meet your specific problem, as this model was for the Bendix Economat washing machine.



Versions of this compact Moyno are applicable as coolant pumps, shallow well pumps and booster pumps.



Economical Moyno for the appliance field, designed for use under flooded head.

BEFORE YOU "FREEZE" YOUR PRODUCT DESIGNS...

Read these **FACTS** about **MOYNO® PUMPS!**

One of these characteristics may improve YOUR product!

Versatile—Pumps liquids, pastes, abrasive-laden slurries. Adaptable to heavy industrial machinery or small drink dispensers, oil burners, dishwashers, sprayers, coolant pumps, etc.

Positive Displacement—Moynos are available to pull up to 29" of vacuum while discharging under pressure. Big Moynos can deliver up to 250 gpm. Pressures to 600 psi obtainable. Provide controllable, non-pulsating flow for metering purposes, in either direction!

Gentle—No churning, foaming; won't break up semi-solids. One Moyno is pumping potato salad!

Trouble-Free—Self-priming; won't cavitate or vapor-lock. Just one moving part—no valves to stick, no pistons to gum up. Low starting and running torque.

What you see here are seven variations of a completely different concept of pump design... the R&M "Moyno" Pump. It operates on a unique progressing-cavity principle, as shown by the large cutaway.

But even more important than how it works is how it performs. A good example is the Bendix Economat Washer, on which Moyno Pumps last seven and a half times longer than any pump tried before! On other types of applications—pumping everything from water, air, and abrasive-laden liquids to heavy, non-pourable pastes—

users find that the simple Moyno Pump design saves maintenance dollars!

If you use pumps—and particularly if your pumping application is a little different—there's a strong possibility that the Moyno can add new features to your product.

New Bulletin No. 50-BW has more facts

Contains performance curves and details on pumping characteristics. Write for your free copy. If you can describe your application, we will be able to reply in even more detail.



ROBBINS & MYERS, INC.

SPRINGFIELD 99, OHIO • BRANTFORD, ONTARIO



Fractional & Integral h.p. Motors & Generators



Electric Fans



Electric & Hand Hoists & Cranes



Moyno Pumps



Propeller Industrial Ventilating Equipment



LORD ELGIN HENSLEE.
14K gold, 21 jewels.

How do leading steelmakers reward their iron men?

The Country's top steel producers know it pays to recognize long and faithful service. They do it by awarding distinguished Lord Elgin Watches.

Follow the leaders of industry by using the prestige of America's finest timepiece in your incentive plan. Mail the coupon today for all the facts.

ELGIN

WATCHES

Service Award Department, Box 13
Elgin National Watch Company
Elgin, Illinois

Gentlemen:
Kindly send me full information about
Service Award Plans.

Name (Please print name and address)

Address

City Zone State

Housing Headquarters to representatives of the group in each city or county issuing bonds. There the figures were taken down on a bid sheet and held until a few minutes prior to the hour of submission.

Once the bids have been sent to the representatives, they are seldom changed, although they are sometimes withdrawn.

• **Ethics**—When it is certain that the bids are in, say a few minutes prior to the actual opening of the bids, the two major groups confide what they have bid. Both sides have worked long and hard to figure out how best to gain the issues at stake, but once they set their bids, they do not change them at the last minute. As one dealer said, "It's largely a matter of ethics—you just would not change your bid once the competition's bid was known."

From this exchange, it is determined which bonds will fall to the dealer group, and which ones they have lost. Then the salesmen go to work. In the

present case, with \$107.5-million of bonds to market, they really start sweating. Until 5 p. m., group orders—those of the member dealers—are taken. The members get a discount on their own orders, and special commissions on any orders for their customers of \$100,000 or more. (The commissions range from $\frac{1}{4}$ of 1% on issues maturing through 1964, and $\frac{1}{4}$ of 1% on longer term issues.)

• **Low Interest Rate**—On this occasion, the housing authorities were able to borrow at an average interest rate of 2.338%, lowest since the January 1952 offering, and a reflection of the general easing of money. Despite the fact that all bonds are government-backed, it has been traditional that those with the "names" (New York, Detroit, Chicago) sell faster and at a lower yield than those of smaller authorities. The syndicate established a scale of prices and yields for each authority, with coupons ranging from .80% on short-term maturities up to 2.65% on the longest maturities.

The Treasury Springs a Surprise

Money men had been expecting a long-term issue, but the government's new offering matures in June.

You're not going to see that expected federal long-term bond issue—at least not immediately.

The Treasury last week announced it would raise \$1.5-billion through sales of short-term tax anticipation bills, which will mature June 24.

Another \$2-billion is to be borrowed before the end of the fiscal year on June 30, but U.S. officials won't say what length security may be used.

• **Surprise**—Announcement of the \$1.5-billion short-term issue came as a surprise to many money men.

Only last month, it was broadly hinted that another long-term issue was to be tried (BW—Feb. 20 '54, p. 30). Strength in the government market seemed to be setting the stage, and bond men generally believed a long-term could be moved out with greater success than last year's 30-year 3½s. The 3½s were driven below par last April, before they even got on the market.

Wall Street guessing was that the next federal issue would be between \$1-billion and \$2-billion, would mature in 25-30 years, and would carry a coupon of 3% or 3½%.

• **Program**—Subscription books on the tax anticipation certificates open Mar. 16; payment will be due on Mar. 22. The payment date was selected so that the \$275-billion ceiling on the national debt will not be pierced. The federal debt now stands at around \$274.3-billion.

Mar. 22 is pivotal because on that day around \$6-billion of tax certificates will be paid off with income tax receipts. This will lower the total debt sufficiently to make room for both the new tax anticipation certificates and \$2-billion more of financing before June 30.

The new tax anticipation bills, like the Treasury's weekly offerings of 91-day bills, will be sold at a discount in competitive bidding.

An index to what price the certificates may bring: The Treasury recently sold a \$1.5-billion offering of 91-day discount bills at a price giving the buyer an average yield of a shade over 1%.

Reflecting the decision of the government to bring out a short-term issue, the Victory Loan 2½s of 1967-72 last week sold at par for the first time in nearly three years. The 30-year 3½s are quoted above \$1,009½.

• **Implication**—The Treasury isn't saying why it has decided to postpone lengthening out the federal debt at this time. One factor in the use of short-term borrowing could be that the Treasury doesn't want to rock the economic boat.

Short-term government issues, which are bought mainly by banks, are generally identified with an easy money policy. The banks pay the government with deposit credits. This has the effect of adding to the national money supply.

Long-term issues, on the other hand, are bought mainly by insurance companies, pension funds, and the like. The long-terms siphon off money that might otherwise go into business securities or mortgages. The tendency is to make money tighter.

Metropolitan: So Big It Needs a Computer

Metropolitan Life Insurance Co. has grown so big that it now needs an electronic computer to keep track of its money. The computer—built by Remington Rand, Inc., and called Univac—is going to start work at the end of this month.

Metropolitan is now the world's wealthiest private company (BW—Feb. 27'54, p34). Its assets at the end of 1953 totaled \$12.3-billion, roughly \$400-million more than those of the former titleholder, American Telephone & Telegraph Co. Life insurance policies handled by Metropolitan are worth about \$56-billion.

• **Investments**—In 1953, Metropolitan had about 54% of its assets invested in corporate securities. It had 15% in U.S. and Canadian government obligations; 19% in city and farm mortgages; and the rest in real estate, policy loans, and cash. The breakdown of its investment in corporate securities shows \$4.2-billion in industrial and commercial bonds, \$1.6-billion in public utility bonds, \$667-million in railroad bonds, and \$156-million in preferred stocks. At present, the company holds only about \$17-million in common stocks.

Metropolitan has focused its business investments in three areas it considers "forward-looking activities which foster economic progress." These are:

• **Atomic energy** for peacetime purposes. Metropolitan loaned \$69.4-million to private utility companies last year for electric power development at Atomic Energy Commission installations in Paducah, Ky., and Portsmouth, Ohio.

• **Natural gas.** The company loaned \$547-million for expansion transmission and distribution facilities.

• **Iron and steel.** It sank \$43-million into developing ore deposits in Quebec and Labrador, plus \$34-million for extraction of low-grade U.S. ores.

• **Earnings**—Metropolitan's 1953 investments earned interest at an average rate of 3.31% after investment expenses but before taxes; after taxes the rate was 3.09%. Comparable figures for 1952 were 3.21% and 3.00%, respectively. Interest on new long-term investments before taxes, but after investment expenses, was the highest since 1933—3.99%.



There when you need it— a report that's invaluable!

When unforeseen circumstances interrupt the schedule of a carload of freight, the lack of information on its whereabouts is a worry to shippers and receivers.

This worry is eliminated, however, for users of the Baltimore & Ohio's Sentinel Service on carload freight. Through its "Automatic Records" feature, both shipper and receiver are immediately notified of schedule interruptions and reforwardings—a typical example of B&O's understanding of shipping men's problems.

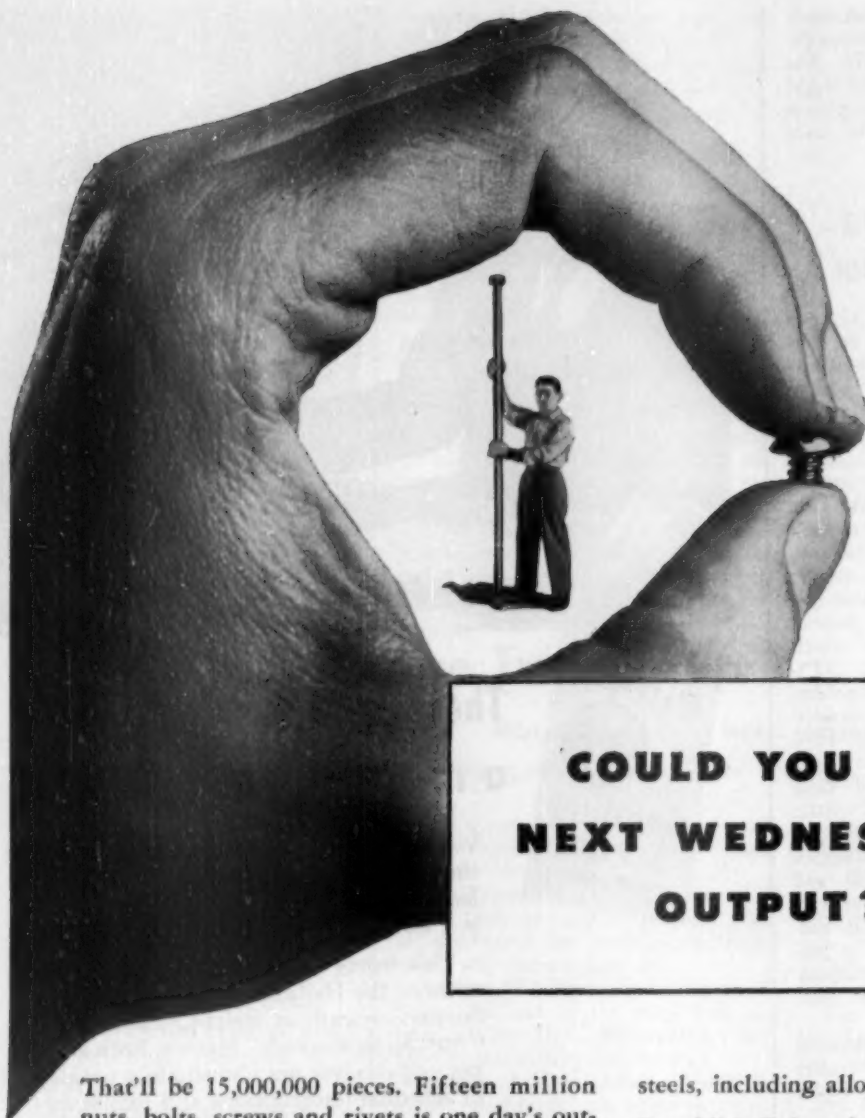
Remember, too, Sentinel Service provides *siding-to-siding* dependability—based on published schedules. No wonder shippers are enthusiastic!

Even if your plant is not on the B&O, you can benefit by Sentinel Service, for it is applied to your car while on B&O lines. Ask our man!



Baltimore & Ohio Railroad

Constantly doing things—better!



**COULD YOU USE
NEXT WEDNESDAY'S
OUTPUT?**

That'll be 15,000,000 pieces. Fifteen million nuts, bolts, screws and rivets is one day's output from Republic's Bolt and Nut Division.

One machine, every minute turns out 5,000 blanks for nuts. The small bolt shown above is only $\frac{3}{16}$ inch, actual size. Some of the Republic bolts used in Hoover Dam were so heavy a man could hardly lift one. Bolts 8 feet long don't cause the quiver of an eyebrow at Republic.

Newest type bolt machines cut the steel to length, then head, trim, point and thread in one operation. Over twenty grades and analyses of

steels, including alloys and stainless, are used.

Republic's Bolt and Nut plant in Cleveland is the largest fastener plant under one roof in this country. Yet it is only one of many plants in which Republic pits its own steels against the ordeal of end use.

Our steel recommendations to you are born of our fabricating experience; are backed by the widest range of standard steels and steel products offered by any steel company; are supported by our metallurgical experts, available to help you make the most of your processes.

REPUBLIC STEEL

GENERAL OFFICES • CLEVELAND 1, OHIO

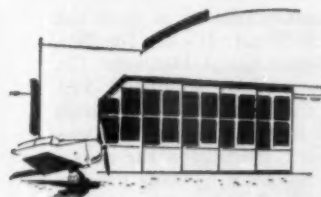


WORLD'S WIDEST RANGE
OF STANDARD STEELS
AND STEEL PRODUCTS



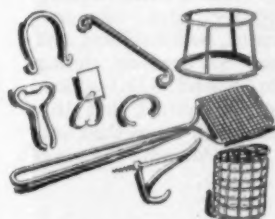
Thousands of steels and steel products now bear the Republic name.

Do you know these?



TRUSCON HANGAR DOORS

A wide range of styles and sizes for both large and small hangars of every type. Motor or manual operation. And Truscon Door Engineers are ready to lend you their experience.



REPUBLIC WIRE

Produced in most types and finishes required by manufacturers of wire products of every description. Stainless steel wire, too.



BERGER PALLET RACKS

Help simplify materials handling problems. Provide the practical way to palletize and stack odd-lot materials, thus achieving space-saving economy.

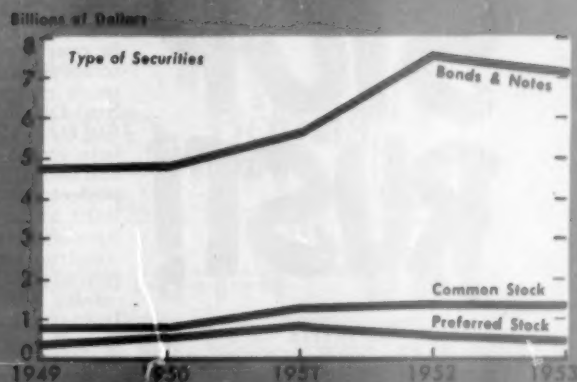
Republic Steel Today:

ore mines here and abroad; lake and ocean-going ships; coal mines; furnaces and huge steel mills, North and South; steel fabricating plants across the nation and in Canada; sales offices in principal cities; PLUS 70,000 men and women working together to produce steels and steel products to help build and protect a stronger America.

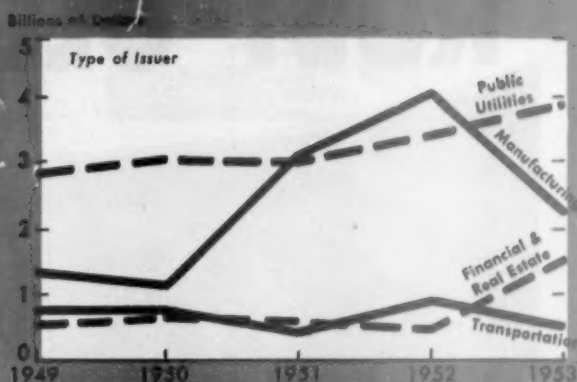
New Corporate Offerings...

Securities offered for cash sales in U. S.

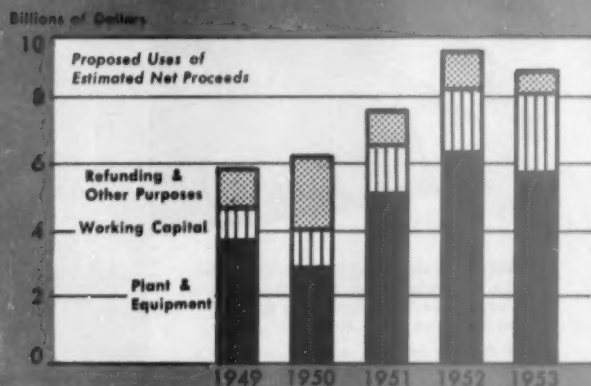
... Hit their peak in 1952, then sagged...



... mostly because manufacturing industry had less need for new money



Major drops: New money for plant and equipment for refunding



The Trend Is Still Down

There was a slight drop last year in the volume of new corporate securities offered for cash. The year's total of \$8.9-billion was 7% under 1952's record \$9.6-billion. The greatest decline showed in manufacturing, down about 44% from 1952. Public utilities continued to rise, totaling \$3.9-billion. In the same period, financial and real estate offerings almost tripled, reflecting the tremendous expansion of installment credit.

New plant and equipment financing declined slightly from 1952's \$6.3-billion to \$5.8-billion. Offerings aimed to increase working capital jumped by \$500-million in 1953, due to demands of sales finance companies.

Unofficial figures on new corporate offerings in February 1954 continue last year's trend (BW—Feb. 27 '54, p114). Corporate bond issues are down by \$184-million, while stock offerings declined by almost \$59-million.

STOP RUST!

with

RUST-OLEUM®

Beautify As You Protect

Simply brush Rust-Oleum 769 Damp-Proof Red Primer directly over the rusted surface after scraping and wirebrushing to remove rust scale and loose rust. Rust-Oleum's specially-processed fish oil vehicle penetrates rust to bare metal—saving time, money, and metal! Then—beautify as you protect with Rust-Oleum's brilliant array of finish coatings. Specify Rust-Oleum for new construction, maintenance, and remodeling. See Sweet's for catalog and nearest Rust-Oleum Industrial Distributor, or clip coupon to your letterhead.



ABOVE: Applying Rust-Oleum 769 Damp-Proof Red Primer Over Rusted Surface After Scraping and Wire-Brushing to Remove Rust Scale and Loose Rust.

AT RIGHT: Applying Rust-Oleum Gray (One of Many Rust-Oleum Colors for Rust Prevention and Decorative Beauty).



There Is Only One Rust-Oleum.
It Is Distinctive as Your Own Fingerprint.

See local classified telephone directory under Rust Preventives or Paints for nearest Rust-Oleum Industrial Distributor.

ATTACH TO YOUR BUSINESS LETTERHEAD AND MAIL TO: Rust-Oleum Corporation, 2423 Oakton Street, Evanston, Illinois

- ☐ Please Show Me the Rust-Oleum "Rusted Panel Demonstration."
- ☐ Test Application of Rust-Oleum Over Rusted Metal Surfaces in My Plant.
- ☐ Complete Literature with Color Chart.
- ☐ Nearest Rust-Oleum Industrial Distributor.

HOME AND FARM USERS CHECK THIS SECTION:

- ☐ Complete Literature and Color Chart for Home Use.
- ☐ Complete Literature and Color Chart for Farm Use.
- ☐ Nearest Rust-Oleum Dealer.



FINANCE BRIEFS

The rails started badly in 1954. The Assn. of American Railroads estimates that January earnings of the Class 1 carriers were only \$18-million, a drop of \$39-million, or 68% below the 1953 month. Gross revenues were off 13.1%, with operating expenses down by only 5.3%.

Largest secondary offering in years will soon hit Wall Street. It's the 1-million shares of International Harvester Co. common—now valued at around \$30-million—in the estate of Mrs. Anita McCormick Blaine, daughter of Cyrus H. McCormick, inventor of the reaper. The sale of the shares is being handled by a nationwide banking syndicate headed by Morgan Stanley & Co. and First Boston Corp.

Outstanding consumer credit (BW—Mar. 6 '54, p. 43) dropped sharply in January, the Federal Reserve Board reports. Individual debt for autos, consumer goods, home repairs, personal loans, and services declined \$771-million during the month, to around \$28.1-billion. A January drop is normal, but this year's figure was much more than seasonal. In the 1953 month, the drop was only \$153-million.

Zooming stock splits: Besides the much publicized 3-for-1 stock split by General Electric, 2-for-1 splits have been approved or are expected soon for Shell Oil, Carolina Power & Light, Illinois Central, Raymond Concrete Pile, Douglas Aircraft, Portland General Electric, Sheraton Corp., and Rubberoid Co. And 100% stock dividends (the equivalent of a 2-for-1 split) have been declared by Republic Natural Gas, American Book, and New Britain Machine; 50% stock dividends have been declared by Wagner Electric, Rohr Aircraft, General Telephone, New York Shipbuilding, Lilly-Tulip Cup, Polaroid Corp., and others.

Allstate Insurance Co. has received permission to write fire insurance on dwellings and their contents in Illinois. The Sears, Roebuck subsidiary says it is taking steps to enter the fire business in other states. Hitherto, Allstate has written only auto insurance.

Taxpayers may be given until Apr. 15, instead of Mar. 15, to figure their federal income tax returns. The House Ways & Means Committee has approved the idea. The task of making out a return, committee members feel, is getting so complicated that citizens are entitled to the extra month.

\$107,500,000 New Housing Authority Bonds

The Bonds of each issue will be secured by a first pledge of annual contributions unconditionally payable pursuant to an Annual Contributions Contract between the Public Housing Administration and the Local Public Agency issuing said Bonds in the opinions of bond counsel. Said annual contributions will be payable directly to the fiscal agent of said Local Public Agency in an amount which, together with other funds of the Local Public Agency which are actually available for such purpose, will be sufficient to pay the principal and interest on the Bonds when due.

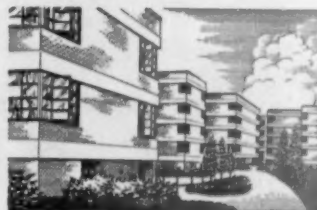
The United States Housing Act of 1937, as amended, solemnly pledges the faith of the United States to the payment of the annual contributions by the Public Housing Administration pursuant to the aforesaid Annual Contributions Contracts.



Quotation from an opinion of the Hon. Herbert Brownell, Jr., Attorney General of the United States, to the President of the United States, dated May 19, 1953:

"IN SUMMARY, I AM OF THE VIEW THAT: * * * A CONTRACT TO PAY ANNUAL CONTRIBUTIONS ENTERED INTO BY THE PHA IN CONFORMANCE WITH THE PROVISIONS OF THE ACT IS VALID AND BINDING UPON THE UNITED STATES, AND THAT THE FAITH OF THE UNITED STATES HAS BEEN SOLEMNLY PLEDGED TO THE PAYMENT OF SUCH CONTRIBUTIONS IN THE SAME TERMS ITS FAITH HAS BEEN PLEDGED TO THE PAYMENT OF ITS INTEREST-BEARING OBLIGATIONS."

1 Public Housing Administration. 2 United States Housing Act of 1937, as amended.



Interest Exempt, in the opinion of counsel to the Underwriters, from Federal Income Taxes by the provisions of the United States Housing Act of 1937, as amended.

Legal Investments, in the opinion of counsel to the Underwriters, for Savings Banks and Trust Funds in New York and certain other States; except as hereinafter noted.

The Bonds of the Municipal Housing Authority of Mayaguez, Puerto Rico are the only exception to the above statement on Legal Investments.

Bonds Issued by Local Public Agencies which are, or are located in:

2 3/4% Scale A		2% Scale C		2 3/4% Scale C	
\$ 1,515,000	Delaware County, Pennsylvania	\$ 8,895,000	Cumden, New Jersey	\$ 1,655,000	Winona, Minnesota
1,125,000	Huntingdon County, Pennsylvania	12,420,000	Chicago, Illinois	5,775,000	Hawaii†
2,855,000	Scranton, Pennsylvania	2,245,000	Cook County, Illinois		
1,490,000	Washington County, Pennsylvania	24,740,000	Detroit, Michigan		
		24,570,000	New York, N. Y.	\$ 1,665,000	Huntsville, Alabama
\$ 4,390,000	Syracuse, New York	5,605,000	Paterson, New Jersey	8,555,000	Mayaguez, Puerto Rico†

† The Bonds, and the interest thereon, of these particular Local Public Agencies, in the opinion of counsel to the Underwriters, are immune from taxation by the respective States of the United States or the political sub-divisions thereof under the applicable decisions of the Supreme Court of the United States construing the Federal Constitution.

Scale A				Scale B				Scale C				Scale D			
2 1/4%	2 3/4%	2 3/4%	2 3/4%	2 1/4%	2 3/4%	2 3/4%	2 3/4%	2 1/4%	2 3/4%	2 3/4%	2 3/4%	2 1/4%	2 3/4%	2 3/4%	2 3/4%
1955 .90%	.90%	.90%	.90%	1965 1.50%	1.80%	1.60%	1.60%	1975 2.00%	2.00%	2.00%	2.10%*	1985 2.30%	2.40%	2.40%	2.50%
1956 .90	.90	.90	.90	1966 1.50	1.80	1.65	1.70	1976 2.05	2.05	2.10	2.15	1986 2.35	2.45	2.50	2.55
1957 1.00	1.00	1.00	1.00	1967 1.60	1.90	1.75	1.75	1977 2.10	2.10	2.15	2.20	1987 2.35	2.45	2.50	2.55
1958 1.10	1.10	1.10	1.10	1968 1.65	1.95	1.75	1.80	1978 2.15	2.15	2.20	2.25	1988 2.40	2.50	2.55	2.60
1959 1.15	1.15	1.20	1.20	1969 1.70	1.70	1.80	1.85	1979 2.15	2.20	2.25	2.30	1989 2.40	2.50	2.55	2.60
1960 1.20	1.20	1.20	1.20	1970 1.75	1.75*	1.85	1.90	1980 2.20	2.25	2.30	2.35	1990 2.40	2.50	2.55	2.60
1961 1.25	1.25	1.35	1.35	1971 1.80	1.80*	1.90	1.95*	1981 2.20	2.25	2.30	2.35	1991 2.40	2.50	2.55	2.60
1962 1.30	1.30	1.40	1.40	1972 1.85	1.85*	1.95	2.00*	1982 2.25	2.30	2.35	2.35	1992 2.45	2.55	2.60	2.65
1963 1.35	1.35	1.45	1.45	1973 1.90	1.90*	2.00	2.05*	1983 2.25	2.30	2.35	2.40	1993 2.45	2.55	2.60	2.65
1964 1.40	1.40	1.50	1.50	1974 1.95	1.95*	2.00	2.05*	1984 2.30	2.35	2.40	2.45	1994 2.45	2.55	2.60	2.65

and accrued interest

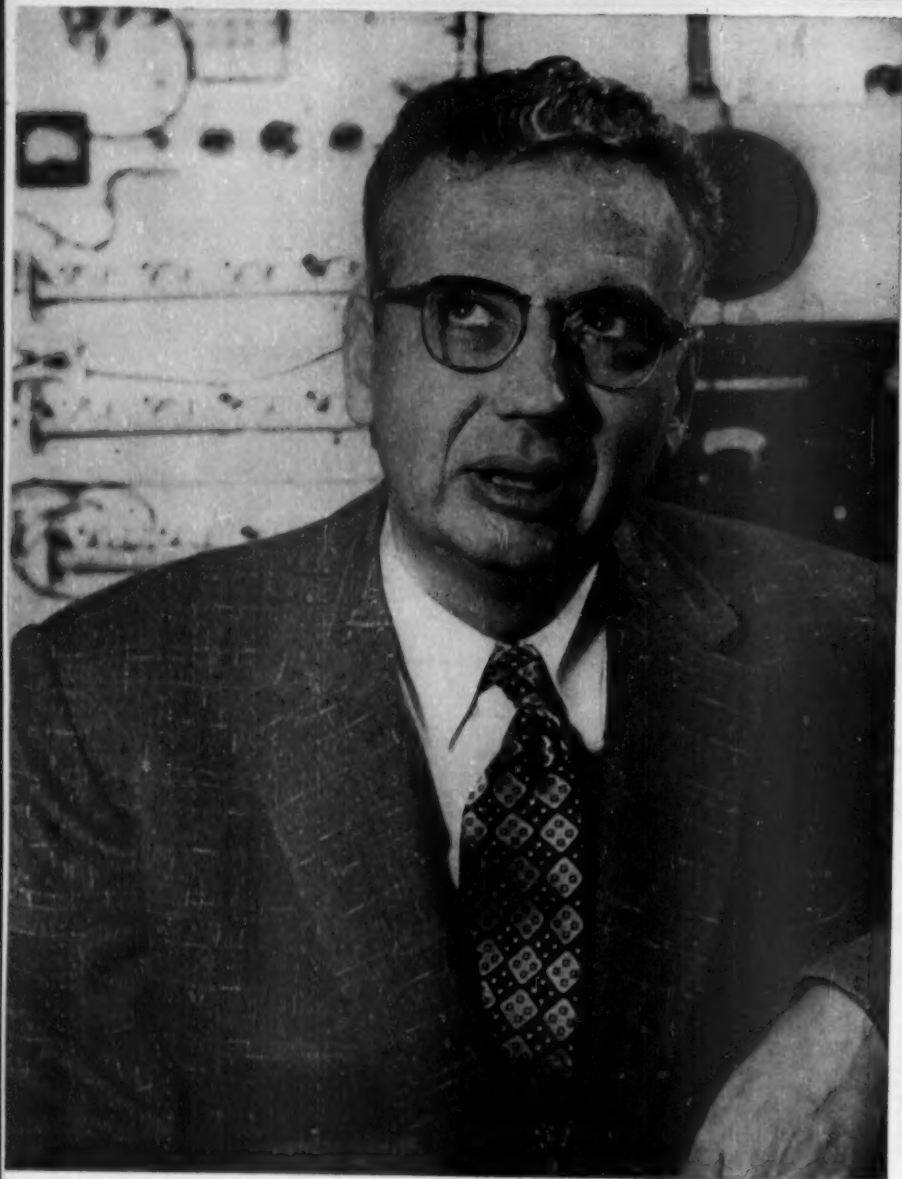
*Yields to first call date on Scale B and D on maturities indicated.

The Bonds of each issue will be callable ten years from their date at a call price of 104 and accrued interest, and thereafter, at the times and call prices, as stated in the Offering Prospectus.

The Bonds are being offered, subject to award, when, as and if issued and received by us, and subject to approval of legality, with respect to each issue, by bond counsel to the underwriters. The offering is not made hereby, but only by means of the Offering Prospectus, copies of which may be obtained from each of the undersigned and other underwriters as are registered dealers in this State.

Blyth & Co., Inc.	Phelps, Penn & Co.	Calhoun Brothers	Goldman, Sachs & Co.	Harrison Rigley & Co.	Smith, Barney & Co.	Shields & Company	The First Boston Corporation	R. W. Prosser & Co.
Dread & Co.	Eastman, Dillon & Co.	Equitable Securities Corporation	Merrill Lynch, Pierce, Fenner & Beane	Stone & Webster Securities Corporation	White, Weld & Co.	Bear, Stearns & Co.	Union Securities Corporation	
A. C. Allen and Company	Alex. Brown & Sons	Coffin & Burr	Estabrook & Co.	Ira Haupt & Co.	Hempill, Hayes & Co.	Harshbarger & Weeks	Lee Higginson Corporation	F. S. Hootley & Co.
Paine, Webber, Jackson & Curtis	Raymond & Co.	L. F. Rothschild & Co.	Schoellkopf, Hutton & Pomeroy, Inc.	American Securities Corporation	Bacon, Stevenson & Co.	Dean, Bowditch & Co.	R. S. Dickson & Company	
First of Michigan Corporation	Hirsch & Co.	Knox, Taylor & Co.	Wm. E. Pollock & Co., Inc.	Tucker, Anthony & Co.	Dean Water & Co.	Wood, Struthers & Co.	Baxter, Williams & Co.	A. G. Becker & Co.
Bryant and Phelps	Francis I. duPont & Co.	Elbridge & Co.	Foiger, Nolan-W. H. Hibbs & Co. Inc.	Geo. R. Gibson & Company	Gregory & Son	Hallgarten & Co.	E. F. Hutton & Company	W. E. Hutton & Co.
McDonald & Company	Lawrence M. Marks & Co.	Rosenberg & Cross	F. S. Smithers & Co.	William R. Staats & Co.	Stern Brothers & Co.	Stroud & Company	Chas. E. Weigold & Co.	

PRODUCTION



ARTHUR A. COLLINS:

He Makes Tinkering Pay

Arthur A. Collins (cover and above) is the son of an Iowa land operator who had an inquiring mind, who ran his farms with ideas of land consolidation and mechanization that were far ahead of his time. The son has the same kind of enterprise. By applying his talent for tinkering, he has turned his amateur radio hobby into an \$80-million manufacturing business.

Collins Radio Co. is Cedar Rapids' largest employer: 4,800 in the home plant there, and another 1,700 in

branch plants in Dallas and Burbank, Calif. Collins does an \$80-million-a-year business, with a current backlog of \$245-million in civilian and military contracts.

It all grew out of (1) giving free rein to experimenters and (2) being more aware than most electronics companies that mechanical engineering can be the best friend electronics ever had. Collins' best-selling items in the radio field combine these two factors.

• **Depression Baby**—Collins Radio was

born at just about the most unpromising time in this century: September, 1933. Arthur Collins, then 23, had to think of some way to make a living. Like most other radio amateurs (hams), he was already building radio equipment for himself, so he decided to build stuff for other amateurs and for commercial use.

• **Today's Lineup**—Now, 21 years later, Collins Radio spreads its sales over three principal markets. In order of dollar volume they are:

• Instrument and radio systems for aircraft. Collins figures it builds 75% of the radio and instrument landing equipment on commercial and executive planes.

• High-powered transmitters for commercial, military, and naval use.

• Sending and receiving equipment for radio ham operators.

In Collins' estimation, the radio ham equipment is not the least of these. Compared with the rest of the product line, it's low in dollar volume, but it's high in prestige value. It's a showcase of Collins quality. Collins builds it for precision and performance, not for a low price tag. Many of the hams who can afford Collins sets are men in key spots, able to recommend big equipment purchases by their own companies. It doesn't hurt if they think of Collins first.

As one industry executive—and radio ham—phrases it, "Arthur Collins has built up an electronics man's electronics company."

• **Labor of Love**—In doing this, Collins has capitalized on the radio amateur's love for experimenting and puttering. Chances are, no company in the U.S.—and no city more than Cedar Rapids—has a higher proportion of hams among its people. And the ham knack for cut-and-try methods gets direct credit for many Collins innovations in electronics design. A hobby approach tends to free a designer from the formulas and axioms of textbooks.

As president and board chairman, Arthur Collins directs most of the technical planning. And he gives his engineers and researchers a free hand. He happily lets them play with any pet idea that could conceivably turn into a practical product some day.

Last year Collins spent nearly \$10-million for development work, much of which admittedly couldn't crop up in finished product for many years to come. Collins' outlay for research—10% to 12% of annual sales—is sky-high compared with the rest of the electronics industry.

• **Electro-Mechanical**—Very early in its career, Collins Radio discovered that electronics and mechanics go together like ham and eggs. One of the earliest

A chemical reaction to air conditioning

The exciting new research home of Wyandotte Chemicals Corporation, in Wyandotte, Michigan, is another distinguished building air conditioned by the Carrier Conduit Weathermaster System. ■ Why did Wyandotte management select Carrier to aid in their search for new miracles of chemistry? To protect delicate scientific instruments. To provide ideal working climate for the staff. To reduce maintenance costs, by reducing the infiltration of dust and dirt. And to insure their investment in air conditioning. ■ The Conduit Weathermaster System is a Carrier development, perfected through years of experience and designed to answer



first name in air conditioning

the special problems of air conditioning office buildings, apartment houses, hospitals, hotels. Small-diameter air conduits save valuable space. Occupants of each room or office can dial their own climate. If you are planning a new building or about to remodel an old one, it will pay you to learn the Conduit Weathermaster story. Carrier people founded the air conditioning industry over 50 years ago. All this experience is yours to command. Consult your architect, builder, engineer. Or write direct to: Carrier Corporation, Syracuse, New York.

Architect: Stanton and Hillier, Detroit, Mich.

Consulting Engineer: George Wagschal & Associates, Detroit, Mich.

General Contractor: Walbridge-Aldinger Company, Detroit, Mich.

Mechanical Contractor: Johnson-Larsen & Co., Detroit, Mich.



The fire upstairs wasn't our fault

...the \$3,121.95 income loss was

(A true story based on Hartford Fire Insurance Co. File #H-50-14827)

We're hat makers—women's hats. And, with a big backlog of fall orders, we were working six days a week to meet demand. Upstairs, there was a fire in a shoe factory. We were flooded . . . had to shut down our fabric hat department ten days for equipment repairs.

That fire upstairs wasn't our fault. But more than half of our resulting income loss was. Our gross earnings were cut \$6,024.32 by the ten-day shut-down. Only \$2,902.37 was recoverable—we simply had failed to keep our Business Interruption Insurance geared to probable earnings.

When it comes to protecting your income dollars during shut-downs, doing things by half is bad.

Doing nothing is worse!

So if you're carrying Business Interruption Insurance, make sure it adequately covers your anticipated income. And if you're without this vital protection, *don't* be . . . even for another twenty-four hours.

Today, see your Hartford Fire Insurance Agent or your insurance broker. Or write for free booklet, No. 84714, which shows how to figure what you might lose in case of a temporary shut-down.

Year in and year out you'll do well with the

Hartford



Hartford Fire Insurance Company • Hartford Accident and Indemnity Company
Hartford Live Stock Insurance Company • Hartford 15, Connecticut

applications of mechanical engineering to an electronics product was the now-standard autotuning equipment in aviation communications.

Before autotuning, an airline ground station had to have a separate radio transmitter for each channel of its radio phones to planes in flight. It might need half a dozen transmitters, each pretuned to one channel. The only alternative was to have one transmitter and tune it manually from channel to channel—a time-consuming process of dial twiddling.

Collins Radio dipped into mechanical engineering principles to gang all the controls in one common twiddling system: one master dial for all the pretuned circuits. Switching from one channel to another is as easy as pressing a button on your car radio, and autotuning pared the airlines' needs down to one transmitter instead of half a dozen. It's now an accepted convenience in home and car radios.

• **Putting Them Together**—It's not always easy to blend electronics and mechanics. Sometimes it's like fitting a square peg into a round hole.

Electronics usually means electricity that's flowing through a wire or through the vacuum of an electronic tube. A mechanical device, on the other hand, has physical motion that comes from the turning of gears or the vibration of other parts.

The two sciences are combined in a couple of new Collins products:

The aircraft navigation card-reader. This miniature mechanical brain is a component of Collins' newest air navigation unit for planes. It relieves pilots of a lot of things to remember during point-to-point flights and instrument landings.

With the card-reader, the pilot has the office force make up a punched card, coded to the route he plans to fly. He feeds this card—which is similar to the cards used in big office machines—into the card-reading unit at the start of a flight. From there on, the unit automatically adjusts dials on the instrument panel and reminds the pilot when to make manual adjustments of the controls. Commercial airlines are trying out the system.

The mechanical filter for short-wave receivers. Short-wave reception isn't always like that on a telephone—you often get a jumble of overlapping voices. Collins' filter strains out these confused sounds, enables a radio operator to pinpoint the voice he wants to hear. It's being used now in ham receivers, but Collins sees a big future for it in long distance telephone and microwave radio.

• **How It's Done**—The filter is a good example of Collins' dependence on the science of mechanics along with electronics. It uses the principle of the



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"... Collins' complex devices put a heavy load on the budget ..."

COLLINS starts on p. 74

tuning fork, taught in elementary high school physics but not often applied practically. The principle: A tuning fork will vibrate if you strike the note that's tuned to it, but won't respond to any other note.

Collins engineers saw this oddity as a way of sorting out radio signals. They made up a stack of small metal disks, each with the same resonance point, and spaced them along a wire. The first disk vibrates to the desired signal among the electrical impulses that go through an electromagnet at the input end of the filter; each disk down the line carries this signal, weeding out the other vibrations. The last disk feeds the strained-out signal into the main circuit of the receiver.

This amounts to a translation of an electrical impulse into mechanical force, then translation back into electricity after a screening process. Besides being efficient by an engineer's standards, this filter does a job much more cheaply than an all-electronic device could do it. An electronic counterpart would require extra circuits and electronic tubes.

• **Costly, Though**—Collins' affinity for tricky and complex devices puts a heavy load on the budget for engineering and quality control, of course. About 20% of the company's employees are in the engineering department, and another 10% are in quality control.

Collins can't adopt the mass assembly methods of a consumer goods manufacturer. Its equipment, especially the air navigation stuff, is built to such close tolerances that it must be tailor-made. It is doublechecked at every stage of manufacture, even to retracing the wiring of an aviation instrument after it has been finished.

"After all," a plant engineer remarked, "we do a lot of flying ourselves."

• **Machine Tooling**—Collins' location in the corbalt rather than in the electronics centers of Chicago and New York adds another cost to the budget.

Shipping distance doesn't matter much when a product is in full production, but charges could be prohibitive if engineers want just a short run of a part to play with in their development shops. So Collins has built up its own collection of machine tools to do any job the engineers need. That costs money, too, but it gives Collins a more complete and versatile machine shop than some of the big electronics companies can boast.

SOUND CONDITIONING



FROM THE STREET, the Hogle & Co. offices have an inviting, modern look. Travertone ceilings help make this possible.



THIS DROPPED CEILING, which creates the effect of a separate office area, presented no problem as Travertone is easy to cut and fit to any flat surface.

NOISE-ABSORBING CEILINGS, shown here in Spokane's J. A. Hogle & Co. are . . .

Latest Trend in Brokerage Offices

Like so many other businesses, brokerage firms have learned that attractive, quiet surroundings pay off in improved customer relations.

In Spokane, Washington, for example, the firm of J. A. Hogle & Co. recently installed sound-absorbing ceilings to quiet the clatter of teletypes, jangling phones, and the constant drone of conversation. The acoustical material used was Armstrong's Travertone.

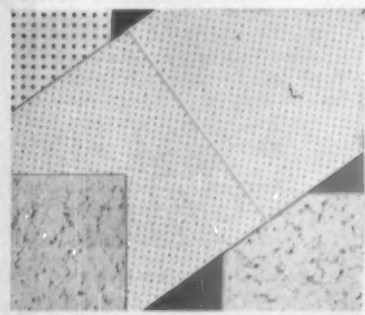
Travertone, a mineral wool tile that soaks up a high percentage of noise, offers other advantages, too. Its fissured surface adds a distinctive, modern touch to the office interior. And because Travertone has a special white paint finish, it reflects light evenly and aids in proper illumination.

In the rear of the Hogle offices, Trav-

ertone was used as a dropped ceiling to create the effect of a separate area. This was not difficult, as Travertone is easy to cut and fit to any design specifications.

By installing modern sound conditioning, Hogle & Co. followed a growing trend evident today in department stores, restaurants, schools, office buildings, and other successful business establishments. To meet this rising demand for efficient sound conditioning, Armstrong offers a complete line of acoustical materials, each with special features designed to meet varying building needs.

For full information, call your Armstrong acoustical contractor. And for the free booklet, "How to Select an Acoustical Material," write Armstrong Cork Company, 4203 Indian Road, Lancaster, Pennsylvania.



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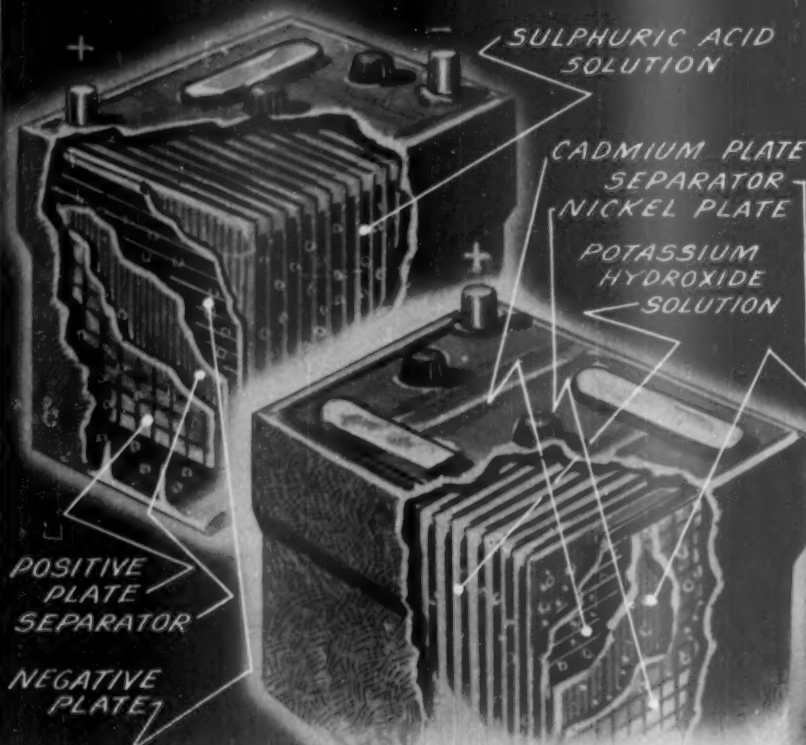


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BATTERY MAKERS: Scouting for



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Nickel-Cadmium

It lasts longer but is still pretty expensive, because the materials that go into it are not so plentiful as lead. In the distant future, your battery may be . . .

© BUSINESS WEEK

Lead Battery Defends

Three months ago, lead storage battery makers were in a flurry over AD-X2, a new additive claimed to stretch the life of an auto battery. The flurry blew over (BW—Nov. 21 '53, p. 30). Then, just as the industry was about to sit back, came a quick succession of dramatic developments from two outsiders:

- Sonotone Corp., Elmsford (N. Y.) hearing aids maker, announced it had perfected a battery of nickel and cadmium (chart, center) that would last for five to 10 years instead of the usual 18 months to two years, would hit the market later this year (BW—Dec. 26 '53, p. 55).

- Radio Corp. of America sent

the word that it had an atomic battery that would last 20 years, could be carried in your pocket (chart, right) (BW—Jan. 30 '54, p. 34).

The news of the neophytes' progress no sooner got around than lead battery men felt the first blasts of a barrage of indignant criticism. Stockholders demanded: "Why aren't we producing a nickel-cadmium battery?" Motorists chided: "Is the lead battery business deliberately withholding a longer-lasting product from the market so it can sell more batteries?"

- **Behind the Splash**—Despite the sweeping new challenge, you won't find lead battery men cowering in a corner.

New Talent



Atomic

The atomic battery would do more than the others ever could—if anybody can find a practical way to make it work. Right now, it's just another laboratory experiment.

Its Title

The two big reasons: (1) Both the new entries are handicapped by important drawbacks that will keep them from dethroning the lead auto battery in the near future; (2) lead men themselves aren't standing still.

A big blot on the present and future of the nickel-cadmium battery is that, for mass-production purposes, there isn't enough nickel to be had—and there's far too little cadmium. A production rate of 2-million batteries a year would soak up almost all of the annual world supply of cadmium—about 5,000 tons—and over a third of the U.S. supply of nickel—100,000 tons. And at that rate, nickel-cadmium bat-

teries would fill only about one-fifteenth of current market demand for about 30-million batteries a year.

Actually, the nickel-cadmium idea is not new. It was developed in Europe some 40 years ago. The Germans showed what N-C batteries could do in automobiles and fighter planes during World War II. Even while Sonotone was adding the refinements that cut the battery's weight drastically and made it a more efficient source of energy, lead battery makers were tinkering with it, too. But the metals scarcity has always put a damper on their projects. When Gould-National Batteries, Inc., a top lead firm, announced last week that it would have a nickel-cadmium battery on the market in about a year, it added frankly: "We're not the least excited about the volume possibilities for the battery."

Sonotone doesn't argue with that. So far, it has turned out 600,000 batteries for defense orders, with the government solving its supply problem. But when it comes to the civilian market, Sonotone may be stymied.

• **Price Barrier**—Something else has kept the lead men cool on nickel-cadmium—its almost prohibitive cost. The battery uses some 10 lb. of nickel at about 60¢ a lb., plus 3 lb. of cadmium, now priced at about \$1.75 a lb. That's over \$11 before you spend a penny for production. The finished product soars to about \$75 at retail. It compares with raw material costs of under \$4 for the lead battery, using 22 lb. of lead tabbed at 17¢ a lb.

The industry doesn't have to have the importance of the price factor spelled out. Several lead battery makers had their hands burned this year when they came out with a larger lead job lasting about twice as long as standard batteries. The big batteries are priced at about \$30—and they don't sell. Nonetheless, in a year or two the manufacturers will probably find themselves making more of the double-voltage batteries—to supply the increasing number of gadgets in new automobiles. But right now the big market still favors the \$18.75 version. One lead man explains: "Who wants to put all that money in a battery that will last three or four years when he knows he's only going to keep the car for two? Still, we have to produce them. Otherwise we get accused of all sorts of things."

This sort of problem is one big reason why lead men have concentrated most of their developmental energy over the years in making the standard lead battery smaller, lighter, and less expensive.

• **Too Weak**—What about the impact of the atomic battery? RCA's unit is not a real contender for the auto market in its present state. The battery can produce just one-millionth of a



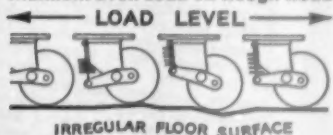
An authentic report on the handling of fragile instruments by Lockheed Aircraft Corp.



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How Lockheed Aircraft Corporation, Marietta Division, materials handling engineers move the B-47's multitude of electronic devices provides the basic information of how many industrial materials handling problems may be solved. The Transportation Department of Lockheed decided upon a foam-rubber lined truck mounted on Faultless Double Action Spring Cushion Casters equipped with pneumatic wheels. Lockheed chose the Faultless line after careful study of available cushion ride casters. Faultless Casters were selected since they best fulfilled the requirements of providing a smooth, jolt-free, low cost ride for the electronic instruments. We can help solve your caster problems, as we have for Lockheed Aircraft. Simply call your local Faultless Caster Distributor listed in the yellow pages of your phone directory. Or write us today.

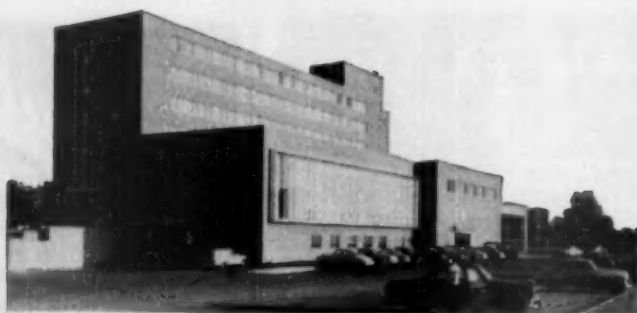
FAULTLESS SERIES SH300
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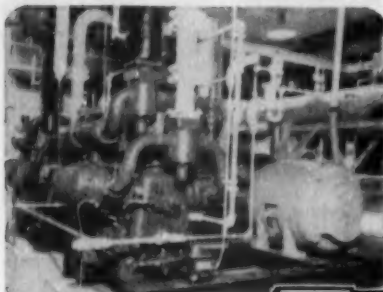
Each month the solution to a real materials handling problem is fully presented in a free, handy size folder. To get the complete story on the Lockheed caster application mentioned above, write today on company letterhead.



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watt—scarcely enough to warm the filament of a flashlight battery. When that will be stepped up to a more realistic quantity is anybody's guess. But it's sure to be many years before the atomic battery moves into an auto-starting system—and right now it looks doubtful that it will ever get there at all.

The operation of the atomic battery departs radically from both the lead and nickel-cadmium models (chart). The last two work on pretty similar principles. The nickel-cadmium battery uses positive plates of cadmium, negative plates of nickel oxide. The plates are immersed in an electrolytic solution of potassium hydroxide. When the battery is operating, ions of oxygen hop off the negative plate, pass through the electrolyte to the cadmium plate.

In the lead battery, you use an electrolyte of hydrochloric acid, one plate of lead oxide, another of lead sponge. Ions of sulfur are pulled out of the electrolyte, deposited on the plates. In time, both plates become lead sulphate, and the electrolyte turns into a weak solution of sulphuric acid in water.

In contrast, the atomic battery uses a tiny amount of radioactive material—about the equivalent of what you'd find on five radium-dial watch faces. The material radiates through a piece of germanium, strikes a piece of impure metal. In minutes the electrons that have deposited on the metal create a difference in potential between the metal and the piece of germanium, equivalent to about one-fifth of a volt. When you link up the germanium and the metal, a current of about 5 micro-amperes flows.



Modern Lightning Rod

Arrester is the name for this modern version of the old lightning rod, made by Westinghouse Electric Corp. Designed for protecting big power plants, it picks up voltage surges from lightning, and discharges them into the ground.

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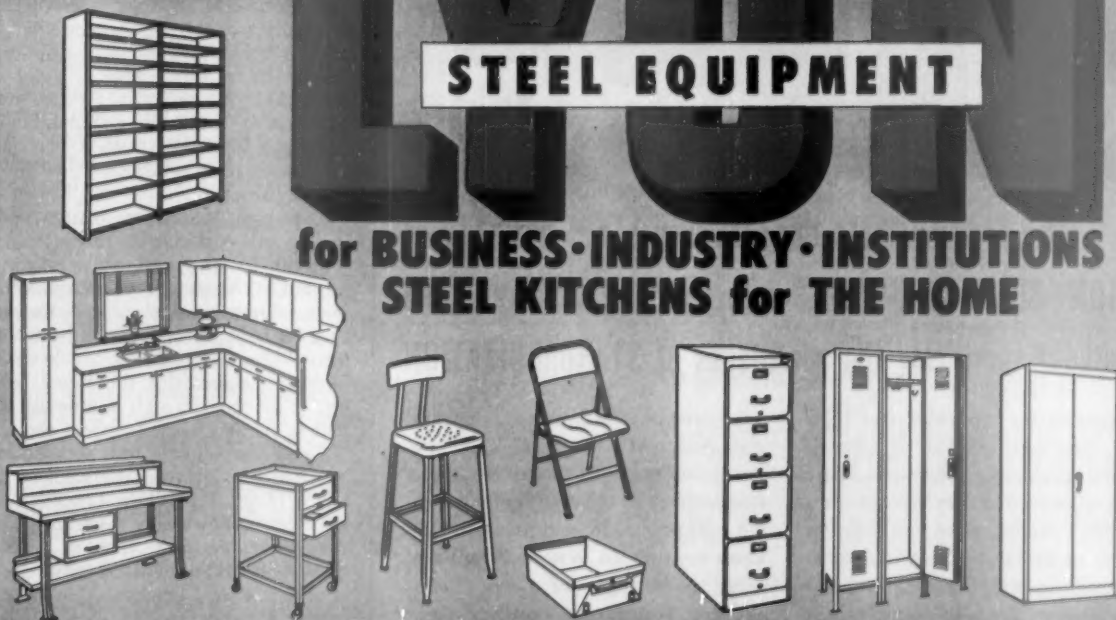
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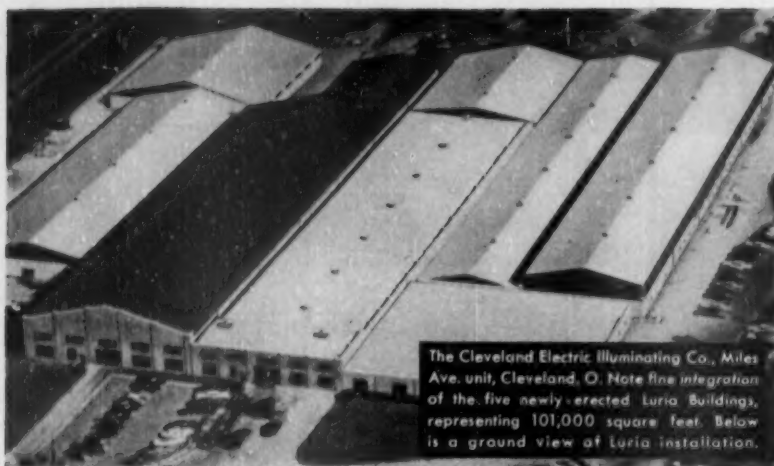
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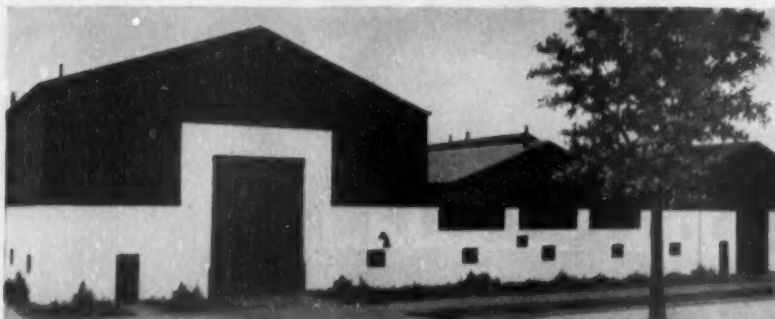
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Sub for Stainless

New alloy, requiring no scarce metals, may replace stainless steel in jet planes and other uses.

A new, high temperature alloy that doesn't require such short-supply metals as cobalt, nickel, and chromium promises to solve some of the major problems of the metalworking industry.

Thermenol, as the new alloy is called, was developed at the U. S. Naval Ordnance Laboratory. According to metallurgists, it is made of noncritical materials and is capable of replacing stainless steel in many cases—such as in jet tail cones and in exhaust systems where corrosive gases are very hot. Because of its high electrical resistance, it may eventually turn up in such items as heater elements in toasters, low temperature furnaces, and in such electrical appliances as stoves.

The alloy is a modification of 16 alfenol, a magnetic material composed of 15% aluminum and 84% iron. During a study of alfenol, metallurgists J. F. Nachman and W. F. Buehler found that by adding about 5% of either vanadium or molybdenum to the aluminum and iron, they got a surprising number of properties in one magnetic material.

• **Property Rich**—Thermenol combines high electrical resistance, corrosion resistance, reasonably high tensile strength, improved ductility, and heat resistance. Practically no other alloy is good for more than one or two of these properties. Also, thermenol is only about a quarter as heavy as stainless steel, and can be heated to 1,300C with low weight loss.

The high aluminum content adds several other desirable properties. It accounts for the new alloy's high resistance to corrosion or oxidation. While some aluminum-steel alloys are now used by industry—mostly for heater elements—they are generally brittle. Naval Ordnance claims that thermenol is the first alloy of such high aluminum content to be developed for sheet use.

• **Good Start**—So far, tests seem to bear out these claims. Experiments at the Lewis Flight Propulsion Laboratory of the National Advisory Committee for Aeronautics indicate that at 1,200F, thermenol is "better than some forms of stainless steel being used in the aircraft industry today."

Obviously, however, this new development isn't going to put the other alloys out of business. In many fields it can't compete, particularly in specialized uses at extremely high temperatures, or with "super alloys" containing high

When you buy truck tires it will pay you to remember:

a discount never yet pulled a truck out of trouble!

All too often, conversations between tire buyers and sellers are dominated by talk of price and discounts.

No mention of value, mileage or the work you'll get out of the tire. Good reason! Tire performance has never yet been improved by a discount.

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The point is not that you should ignore price. Rather, it is that you should use price only as a yardstick for measuring a tire's true value. *What do you get for what you pay?*

An important question, for premature failure of just one tire can cost you far more—in costly "down time," schedule delays, wasted man hours, repair or replacement costs—than the total price of the tire, let alone the amount of the discount.

The same applies to tires that fall down on the tough jobs—on muddy or icy roads, in heavy pulling, rough off-the-road work, or high-speed long distance hauling. *Tires that only work "part time" are no bargain, even at a discount.*

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How to buy value

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... to true tire value is your own cost-per-mile record, comparing actual miles delivered for dollar paid, brand for brand. Kelly welcomes this kind of comparison, for our files are loaded with case histories very like the one below. Why not see *how much more* mileage your truck tire dollar can buy at your Kelly Dealer's? He gives unsurpassed fleet tire service, too, makes your tires go farther, more safely. His expert inspection and maintenance service are **FREE** to every Kelly customer. See him today and get the tire performance *and* value you've been looking for.

— FROM KELLY CASE HISTORY #131 —

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percentages of cobalt. Nor in many cases can it compete with titanium, which is a much lighter material. And Inconel (about 80% nickel) has about double the life of thermonol at the same temperature and under the same conditions of stress (BW—Feb. 20 '54, p130).

• **Low-Cost Factor**—In the long run, thermonol should be comparatively cheap to produce. The basic ingredients—aluminum and iron—are cheap and plentiful. Certainly production costs won't compare with those of titanium.

Another cost-cutter is the fact that you won't have to remodel your plant to produce it. With minor changes, you can use the same machines you use for the old alloys.

There's one catch, however. Like alfenol, you have to cold roll this material, and it isn't so easy to work as some of the ordinary steels. But Ordnance has worked out a tricky process that makes it comparatively simple. As with alfenol, the cold rolling is done at a temperature of 575°C. The crystal structure is retained but elongated and reduced to sheet form. The result is an alloy with about 100 times the high tensile strength of alfenol.

PRODUCTION BRIEFS

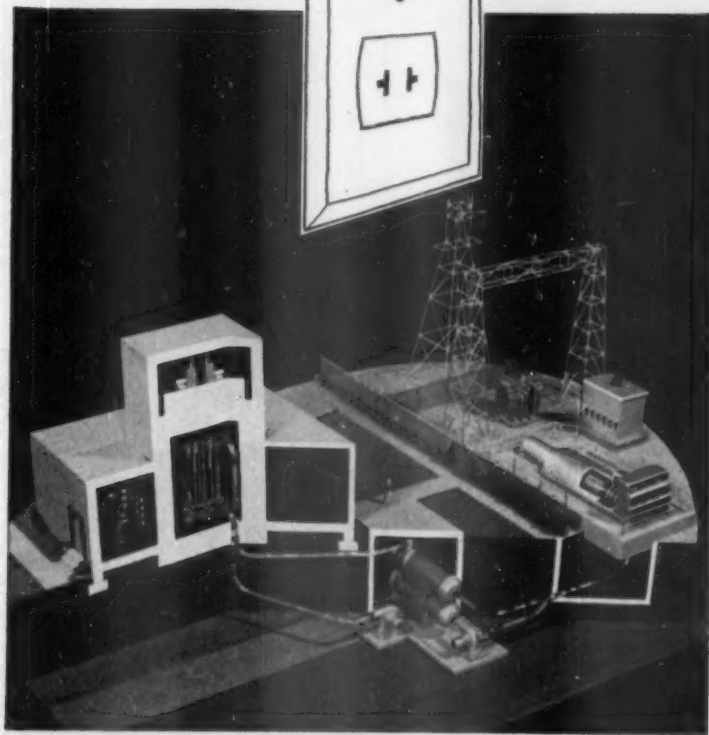
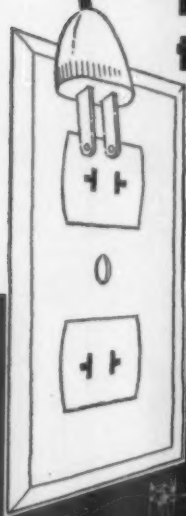
High salary bait is still being used by many companies to lure engineering graduates. Illinois Institute of Technology, Chicago, says its January grads got an average starting salary of \$373 per month. This record figure is \$32 above a year ago, and \$11 over last June's average.

Standards for pallets will be worked out by a committee of the American Standards Assn. The association voted last week to have research done on pallet sizes, materials, and components, and on the procedures for testing and inspection.

Shock-protected boxcars developed by Pullman-Standard Car Mfg. Co., Chicago, have been ordered by eight railroads. A year's road testing by Western Pacific RR showed the cars can cut breakage of fragile shipments by 60%; now 100 of them have been ordered. Bunches of rubber compression pads separate the body of the car from the underframe, and cushion the jolts.

Wood panels made from sawmill shavings will be produced at the new North Bend (Ore.) plant of Weyerhaeuser Timber Co. Weyerhaeuser's normal timber operations produce enough shavings to keep the plant busy. Annual panel output is expected to be 11.5-million sq. ft. of ¾-in. board. Board

next...we plug into the atom

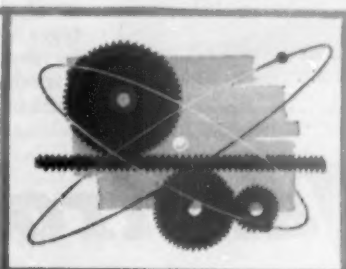
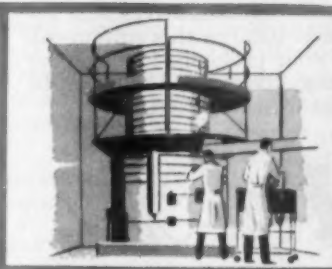


More than just a gleam in an engineer's mind... the atomic power station that may someday light your home is already being planned. Long and hard work lies ahead before the first plant goes into operation... but the incentives for pushing ahead in this field for the national welfare are many.

In its research work for the Atomic Energy Commission, North American Aviation early began exploring the possibilities of atomic power plants. Already, North American's large skilled team of scientists and engineers have designed and conducted engineering experimentation for such plants.

Other North American accomplishments include the design and construction of reactors for many research applications. Research reactors designed and built by North American Aviation for the Atomic Energy Commission are in operation at the North American atomic energy research laboratory and at the California Research and Development Company... helping provide data for many important nuclear projects.

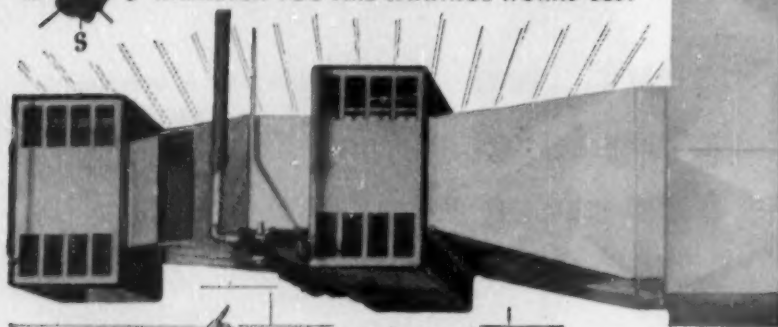
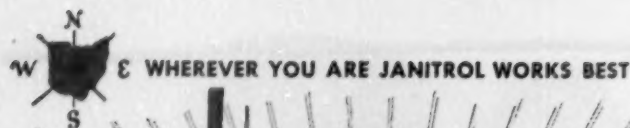
Diversified research has already given us vital answers—in medicine's fight on cancer, in a variety of industrial projects... in advancing our knowledge of the atomic sciences. Each phase of North American's nuclear program will help to establish the sound engineering base... upon which will be built the atomic developments of tomorrow.



organization, facilities and experience keep

North American Aviation years ahead
in aircraft... atomic energy... electronics... guided missiles... research and development.





*"Our Janitrols save us
over 40% in fuel costs"*

Says Mr. C. J. Mayle, President, Fremont Tool & Die Co., Fremont, Ohio, comparing Janitrol Unit Heaters with oil-fired steam heat used previously.



Here's how Janitrol engineers and equipment solved all of Mr. Mayle's tough heating problems.

- Bothersome drafts, caused by the exhaust of heated air in the removal of abrasive dusts, were eliminated by bringing in outside air, "tempered" by Janitrol DUCT Heaters. The Dura-tube heat tubes in the DUCT units minimized the corrosive effects of condensation caused by the cold outside air.

- The 'Surface' Industrial Processing Furnaces, "big brothers" to the Janitrol line, made warm spots in the shop area. Individual Janitrol Unit Heaters, with separate thermostats, provided uniform, zoned comfort throughout.

- Economical year 'round office comfort was obtained by using the same duct system for summer cooling and winter heating. The plant is ventilated in summer by the unit heater blowers.



These Janitrol Units temper the outside air which is brought in to replace the heated air exhausted in abrasive dust removal.

It is not only the superiority of Janitrol design, but also the training of its engineer-representatives who integrate and balance this equipment to meet your problem. For new, or remodeling advice, send these problems to us. No obligation.

Janitrol Gas-Fired UNIT HEATERS

DIVISION OF SURFACE COMBUSTION CORPORATION
400 DUBLIN AVE., COLUMBUS 16, OHIO

MAKERS OF SURFACE INDUSTRIAL FURNACES AND KATHABAR HUMIDITY CONDITIONING

using a shavings base is old hat in England and Germany, but is new to the U.S. timber industry.

A hydrogen-cooled generator, said to be the world's first, has been turned on at Niagara Mohawk Power Corp., Buffalo. The copper coils of the unit are hollow to permit passage of the cooling hydrogen. Designed by Westinghouse Electric Corp., the cooling system cuts 87 tons from the weight of the generator.

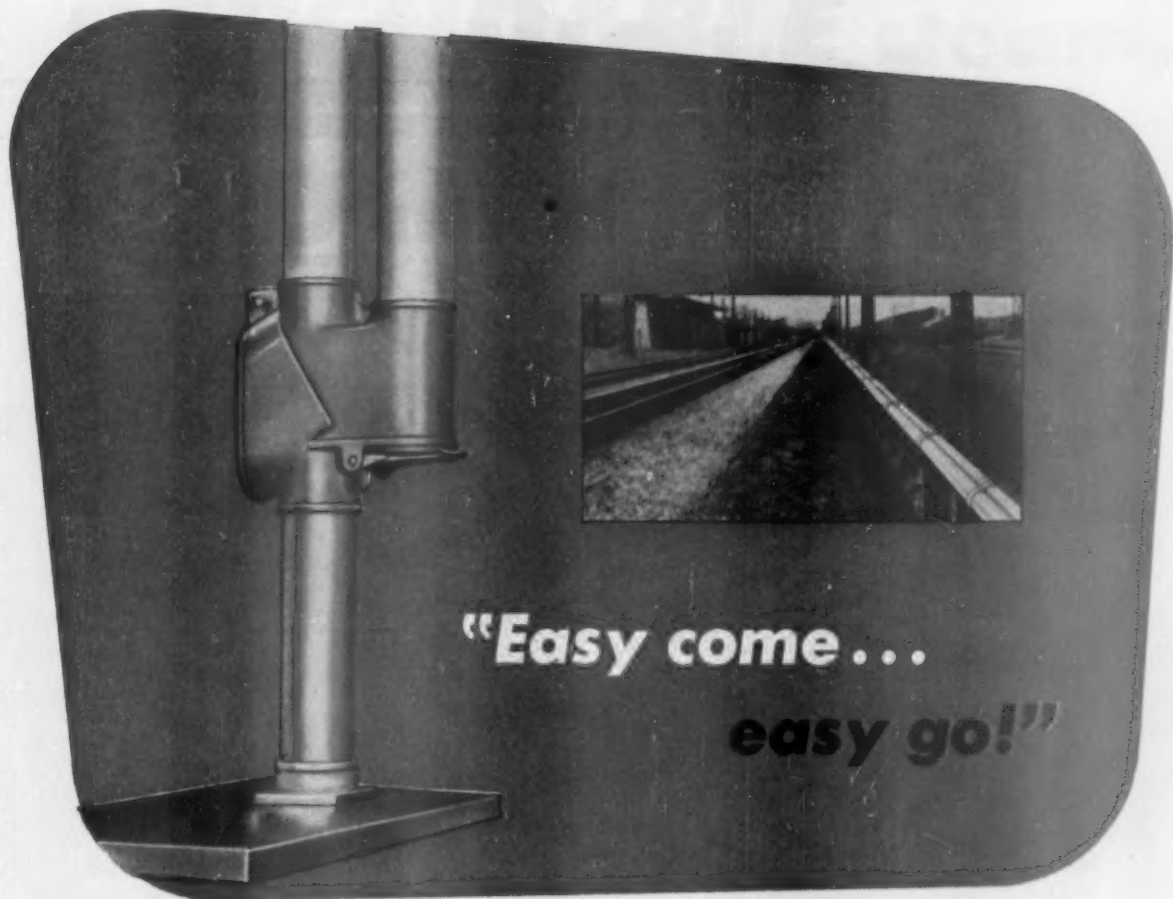
Chemistry of animal skin will be studied in new basic projects at the University of Cincinnati Tanners' Council Research Laboratory under terms of an anonymous \$100,000 grant. First award under the new grant has been given to Dr. Clara L. Deasy for basic research on tanning technology.

A rocket laboratory, latest addition to rocket and jet-propulsion research facilities at the school, has been completed by Purdue University. The \$100,000 lab has been specially designed for instruction in basic research activities, and will be used by graduate students on such problems as combustion characteristics of rocket fuels, motor cooling, and rocket combustion.



Mechanical Ash Cans

The anthracite industry—ever alert to ways to make home heating with coal just as easy as with any other fuel (BW—Feb. 13 '54, p182)—has gained an ally in Brattleboro, Vt. The ash-removal service (above) saves carting ashes out of the basement. The truck's engine powers a high-speed fan that sucks the ashes out of the furnace through a tube. The truck hauls away the ashes without stirring up a dust.



**"Easy come...
easy go!"**



Kelly Pneumatic Tube Systems use Aluminum for Efficiency and Economy

Aluminum proves the perfect metal for pneumatic tube dispatching systems both in intricate store or office installations and lengthy outside applications. The light weight of aluminum, one-third that of metals previously used, means initial savings in shipping, minimum structural support and reduced labor costs for installation.

Resistance to rust and corrosion pays big dividends three ways. Since much of the tubing is installed inside building walls, under floors or underground where it is not readily accessible, aluminum eliminates major maintenance and replacement expense. Even for outside installations the elimination of maintenance means big savings.

Aluminum tubing interiors remain bright and smooth... hence, more savings because no lubricant is needed.

And thirdly, aluminum is naturally protected against weathering so it requires no painting or repainting... another important savings!

This proof of performance with aluminum, as demonstrated by the progressive thinking of Kelly Systems, Chicago, Illinois, may suggest a similar conversion from other material to aluminum in your products. Lower initial and installation costs, reduced maintenance, attractive appearance, ease of fabrication, and longer life all add up to lower overall costs per year for aluminum users.

Consult Reynolds Aluminum Specialists about your design or production problems. Call the Reynolds office listed under "Aluminum" in your classified directory or write Reynolds Metals Company, 2585 South Third Street, Louisville 1, Kentucky.

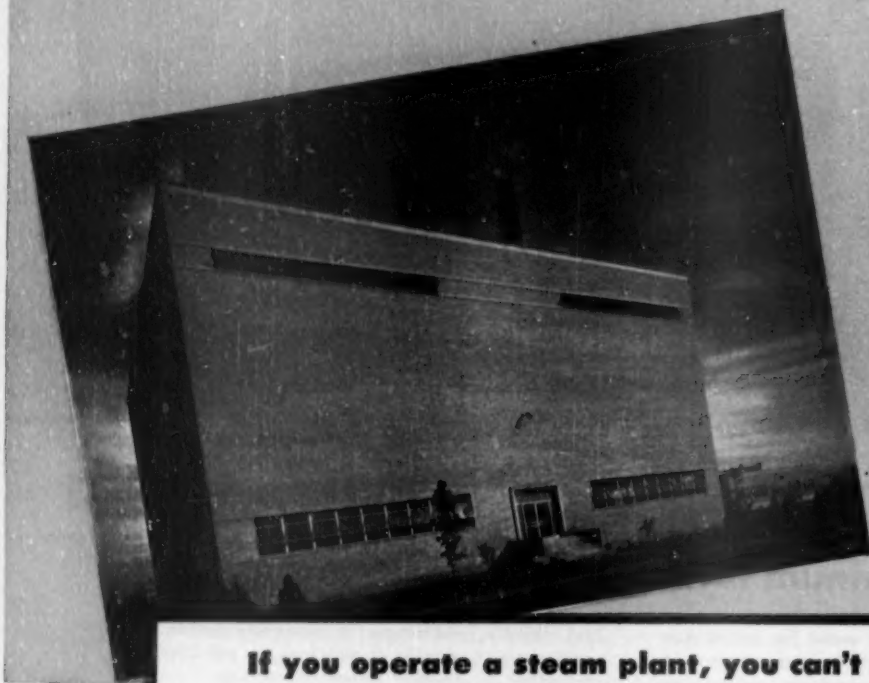
See "Mister Peepers" Sundays on NBC-TV. Consult local listing for time and station.

REYNOLDS ALUMINUM

MODERN DESIGN HAS ALUMINUM IN MIND

For **LOW-COST** **UPJOHN** burns **COAL**

UPJOHN'S new pharmaceutical plant which includes units for production of penicillin and cortisone, as well as some 700 other pharmaceutical products, relies on coal for dependable steam.



This ultramodern boiler house supplies steam, cleanly and efficiently, at only 40¢ to 42¢ per 1,000 lbs. It delivers 115,000 lbs. per hour at peak load for the Portage Road Plant near Kalamazoo, Michigan.

There are no dust or smoke nuisances, thanks to the dust collecting and cinder re-injection system.

For both efficiency of operation and economy, you just can't beat coal burned the modern way!

**If you operate a steam plant, you can't afford
to ignore these facts!**

COAL in most places is today's lowest-cost fuel.

COAL resources in America are adequate for all needs—for hundreds of years to come.

COAL production in the U.S.A. is highly mechanized and by far the most efficient in the world.

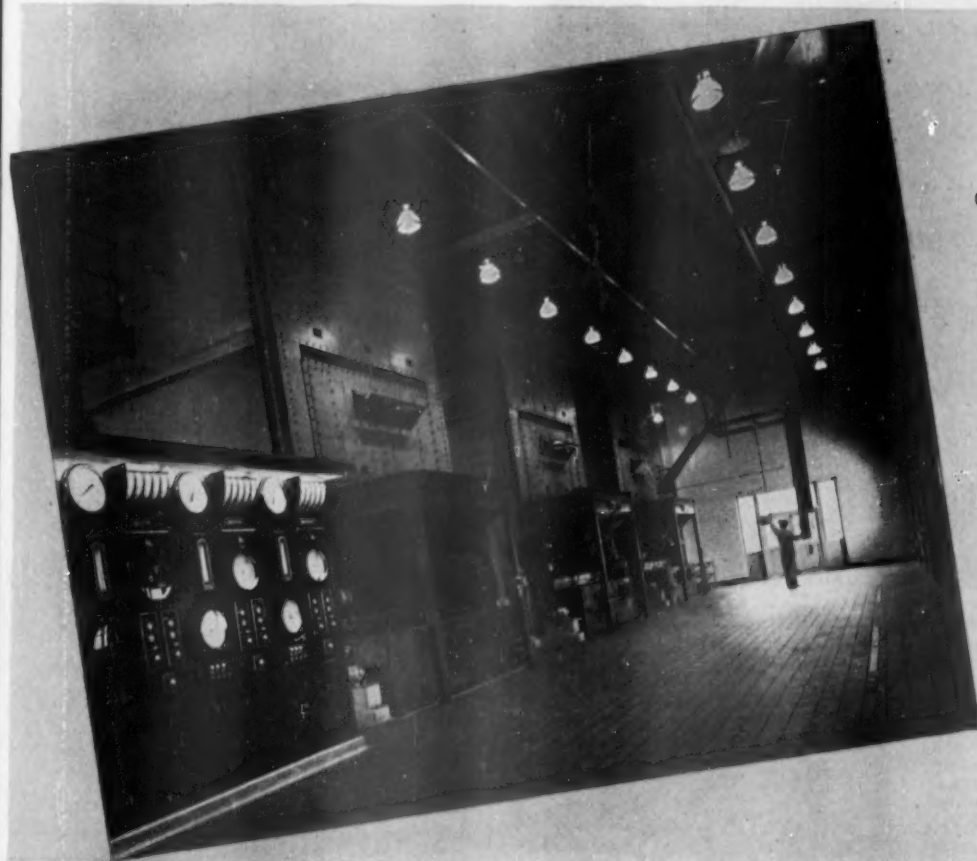
COAL prices will therefore remain the most stable of all fuels.

COAL is the safest fuel to store and use.

COAL is the fuel that industry counts on more and more—for with modern combustion and handling equipment, the inherent advantages of well-prepared coal net even bigger savings.

**FOR HIGH EFFICIENCY
FOR LOW COST**

DEPENDABLE steam, **the modern way!**



CLEAN, CONVENIENT!

This view of Upjohn's firing aisle shows how clean and convenient coal can be when handled and burned the modern way. The stoker hoppers are fed from an overhead bunker. A 2-ton capacity weigh larry serves all boilers.

The ash handling is fully automatic. Traveling grates continually discharge ashes into hoppers below the floor of the firing aisle.

The 3 boilers shown, plus a fourth recently installed (not illustrated), supply all Upjohn's steam needs.

● Whether you're building a new plant or modernizing an older one, you can count on coal for dependability and low-cost operation.

Here's why: Up-to-date coal-burning equipment can give you 10% to 40% more steam per dollar. Automatic coal- and ash-handling systems can cut your labor cost to a minimum. Let a consulting engineer show you how a modern coal installation, tailored for your specific needs, can save you real money.

Here's something else, too—of all fuels, coal alone has virtually inexhaustible resources. This, plus the fact that America's coal industry is the most efficient in the world, assures you of a dependable supply of coal at relatively stable prices now and for years to come.

BITUMINOUS COAL INSTITUTE
A DEPARTMENT OF NATIONAL COAL ASSOCIATION
WASHINGTON, D. C.

YOU CAN COUNT ON COAL!

When storms knock out electric power...



*Prevents losses from frozen plumbing, food spoilage.
Protects your family from dangers and hardships.*

When storms interrupt electric power you have no heat, refrigeration, lights or even water if you have your own well. Radio, sump pump, water heater and other electrical equipment cannot operate.

You can avoid losses, dangers and hardships by installing an Onan Emergency Electric Plant in your garage or basement. Very little space is required; installation is simple and inexpensive. When power outages occur, the Onan Plant supplies regular 115-volt A.C. electricity for as long as the emergency exists. Automatic controls start the plant when power is interrupted and stop it when power is restored to protect your home even when you're away!

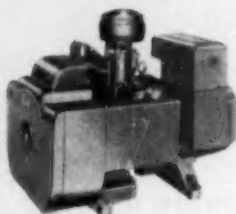
Onan Emergency Electric Plants are built in capacities to fit the needs of any home or business . . . 1,000 to 50,000 watts.

*Write for **FREE** estimate!*

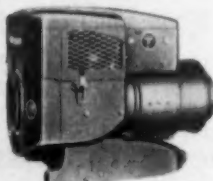
If you will let us know your requirements we will recommend the size and type plant you need.

D. W. ONAN & SONS INC.

8332 University Avenue S.E.
Minneapolis 14, Minnesota



**MODEL SCW 5,000 watts A.C.
Gasoline-Powered**



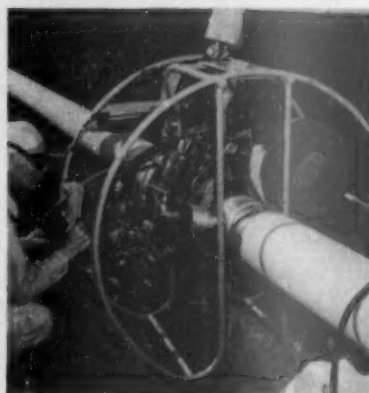
**MODEL 305CK 3,500 watts A.C.
Gasoline-Powered**



as low as
\$384⁰⁰

(1,000 watt model)

NEW PRODUCTS



Quick Aluminum Welder

Reynolds Metals Co. has a new automatic welding machine to tie an aluminum pipeline together. Currently, the company is using it to weld the 40-ft. sections of aluminum pipe that will stretch 12 mi. to its alumina plant at La Quinta, Tex. It will be the state's first aluminum pipeline.

The welding machine was developed in conjunction with Air Reduction Sales Co., New York. It is suspended over the pipeline by a side boom—clamps grip the pipe, hold it firmly during the welding process. Welding starts when you push a button; this touches off the arc, starts the apparatus on its way around the circumference of the pipe. When it completes the cycle, the machine automatically stops, returns to its starting position. Then the clamps are released and it is moved to the next weld. Each weld can be completed in about 25 sec.

• Source: Reynolds Metals Co., Third & Grace Sts., Richmond 19, Va.



Sensitive Metal Sorter

This meter is used to sort metal parts where varying chemical composition or alloy content are the only distinguishable features. Developed by



New ideas are better ideas
when they employ **STAINLESS STEEL**



Write
for
Your Copy

**ALLEGHENY METAL
IN THE
DAIRY INDUSTRY**

One of the Allegheny Ludlum "Industry Book" series—36 pages of useful information on the uses of Allegheny Metal in dairy and milk-product plant equipment, also data on fabrication methods. Similar booklets on other industries: chemical, petroleum, food, hospital, paper, etc., are available.

ADDRESS DEPT. W-51

Ex-cell-o Corporation's "Pure-Pak" container is a mighty popular milk package. Dairies in every state are using it to the tune of more than a half-billion monthly.

But Ex-cell-o improved it, just the same . . . designed a container that opens out to pour like a pitcher. Now the dairies that use Pure-Pak Containers will find the convenience of their customers better served. And as always, the need for complete cleanliness is better served by the use of stainless steel in all parts of Pure-Pak

milk packaging machines coming in direct contact with the milk, or exposed to large amounts of water in cleaning.

In *your* business, wherever easy, low-cost sanitation and the purity of products are prime factors—or wherever good looks, long life, great strength, or top resistance to corrosion and heat are vital to you—that's the place to use Allegheny Metal, the time-tested stainless steel. Let us work with you. Allegheny Ludlum Steel Corporation, Oliver Bldg., Pittsburgh 22, Pa.

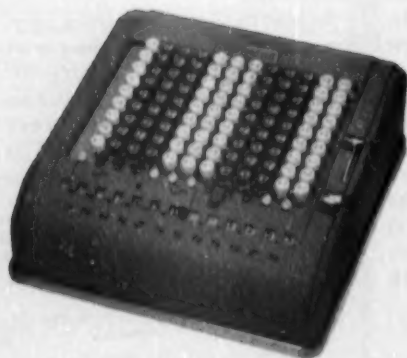
You can make it BETTER with
Allegheny Metal

Warehouse stocks carried by all Ryerson plants





DUAL-ACTION COMPTOMETER®



The flick of a finger makes two machines out of one—one to *calculate*, the other to *accumulate*. Accuracy assured with 3-way Error Control—sight, sound and touch. Call your Comptometer representative.

COMPTOMETER ADDING-CALCULATING MACHINES are made only by Felt & Tarrant Manufacturing Co., and sold exclusively by its Comptometer Division, 1733 N. Paulina St., Chicago 22, Ill. Offices in principal U. S. cities and throughout the world.



Electric and non-electric models

General Motors Corp., it is said to be able to distinguish between two pieces of steel that differ by only 0.05% in carbon content. Say you have a bin full of gears; some are of SAE 1112 steel, the rest SAE 1117. When you touch the two metal probes of the meter—called the Thermoelectric Metal Comparator—to any one of the SAE 1112 gears, the meter gives you one reading. When you do the same to a gear SAE 1117, you get another. If gears of a third SAE rating happen to get into the bin by error, the meter detects these also.

GM has used the meter to sort metallic test bars, automotive valves, clutch levers. Also, it has used the meter to detect chills in castings, an important factor in quality control.

• Source: General Motors Corp., Detroit 2, Mich.

NEW PRODUCTS BRIEFS

To control the level of stored material, Hewitt-Robins Inc., Stamford, Conn., has introduced an electronic indicator. A steel probe, placed at the desired level, activates a transmitter as soon as stored material surrounds it. It can be used for such materials as ore, coal, sand, chemicals.

• A golf ball that is claimed to travel 10 yd. beyond any now in use is being marketed by the U.S. Rubber Co., New York. The company says that diamond markings on the cover give the extra distance. It is available in the U.S. Royal brands.

• A light-weight engine for industrial and truck uses has been introduced by All-Scott Div. of ACF-Brill Motors Co., Berkeley, Calif. It develops 200 hp., weighs less than 1,300 lb., which is claimed to be the highest power-weight ratio of any heavy-duty truck engine.

• Bed sheets made of cotton and nylon, claimed to be the first time such a combination has been made in sheet making, were introduced last week by J. P. Stevens & Co., Inc., Stevens Bldg., New York, N. Y.

• A coin-collection machine for buses and street cars that shows instantly the total fare deposited by each passenger has been developed by Grant Money-Meters Co., 17 Warren St., Providence 7, R. I.

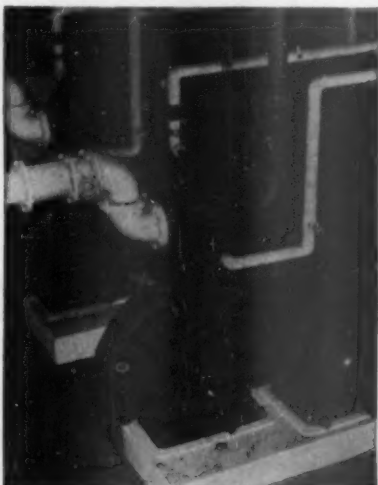
• A cement mortar that resists most acids and alkalines has been introduced by the Pennsylvania Salt Mfg. Co., Philadelphia, for industrial construction and the maintenance trades.



Above: Joy WNO-112 Oil-Free Compressor

Below: Joy WGO-9 Oil-Free Vertical Compressor

It's **JOY** for OIL-FREE AIR



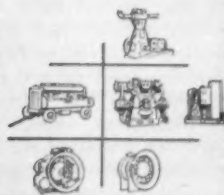
Backed by manufacturing experience since 1915

- ★ Special lightweight pistons minimize wearing pressure on the rings.
- ★ Ease of disassembly facilitates inspection of pistons, rings, cylinder liners and valves.
- ★ On-the-job-replaceable chrome-plated cylinder liners for hard, smooth, friction-reducing surfaces. Also replaceable crosshead guides.
- ★ Carbon graphite compression rings designed to compensate automatically for wear.
- ★ Large, direct air passages and liberal water-jacketing reduce heat of compression and increase ring life.
- ★ Patented Dual-Cushion valves, all parts of which are made from corrosion-resistant materials.
- ★ All wearing areas, except carbon rings, are either chrome-plated, surface hardened, or of stainless steel.
- ★ Complete line of types and sizes of compressors to meet any capacity and pressure requirements. ● Let us quote on your air supply needs of any nature.

Joy Manufacturing Company, Oliver Building, Pittsburgh 22, Pa. In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario.

Consult a Joy Engineer

for Vaneaxial Fans . . . Compressors, Vacuum Pumps and Boosters . . . Oxygen Generators



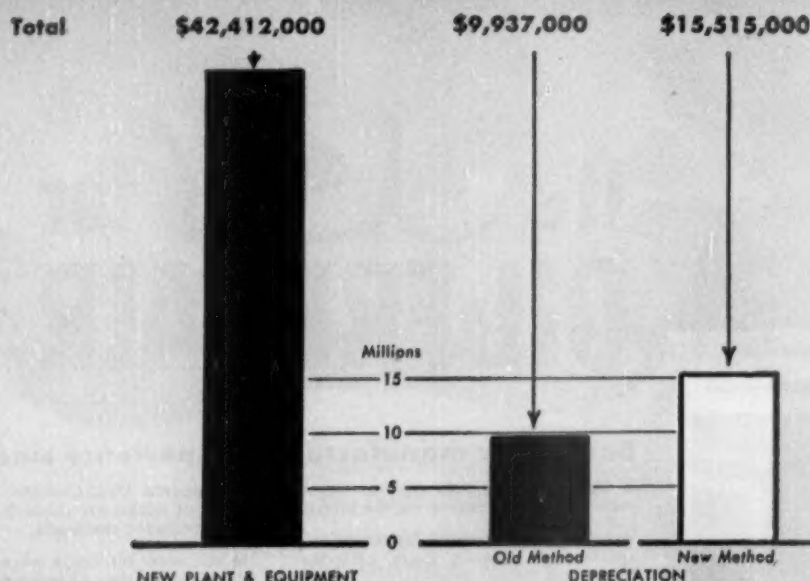
W&O 1-4662

JOY

SPECIALISTS IN THE COMPRESSION AND MOVEMENT OF AIR AND GASES SINCE 1885

If Proposed Depreciation Rules Had Been in Your Company Might Have Fared in the

... You would have taken this depreciation deduction for taxes				
	If you had invested this much in new plant and equipment ...	Present method	Proposed method	Your tax rate was
1947	\$ 7,723,000	\$ 402,000	\$ 793,000	40 %
1948	8,011,000	845,500	1,587,000	40 %
1949	5,231,000	1,190,000	2,065,000	40 %
1950	2,477,000	1,342,000	2,094,000	57 %
1951	7,741,000	1,722,000	2,698,000	80.75 %
1952	3,707,000	1,967,000	2,830,000	82 %
1953	7,522,000	2,469,000	3,448,000	52 %



Data: Figures taken from books of an actual company.

New Write-Off Rules Will Force New

New tax rules to speed up the rate of capital spending write-offs seem almost certain to be passed by Congress this year. The changes are part of the omnibus tax revision put together by the House Ways & Means Committee (BW—Feb. 13 '54, p. 136).

Essentially, the proposal on depreciation of capital assets does two important things:

- It gives management the chance to recover the money it spends for plant and equipment much faster than has been the case in the last 20 years.

- For the first time in years, top management—rather than the government—would be able to make some of its own decisions on business depreciation policy for tax purposes. Up to now, the Treasury Dept. has called the tune on methods and rates. The new bill allows much more flexibility.

- Specifically—You get some idea of the impact of the liberalization from the illustration above. This shows roughly what would have happened to a company (aside from special five-year amortization certificates) had the pro-

posed revision been in effect during the postwar expansion boom.

Don't forget, though, that the example overstates the case. First, the period was one of high taxes. Second, the figures stop at 1953. If you project them to cover the useful life of the plant and equipment involved, the taxes that the company didn't pay in the early years would be collected by the Treasury in later years. Rather than a tax savings, it amounts in many ways to a tax deferment—and if taxes shoot up a few years from now, the company

Effect, Here's How Postwar Boom

So the new method would have reduced your taxes each year

\$ 156,000
297,000
350,000
329,000
577,000
484,000
509,000

\$2,702,000

↓
This represents extra cash in hand over old method for these years.

©BUSINESS WEEK

Decisions

might even be behind in the game.

Finally, the example is second-guessing. Unfortunately, when business makes a decision such as one on depreciation policy it can only forecast what the economy will do.

So for management, the decisions required by revision of depreciation rules are far from cut-and-dried. In fact, the new measure is by no means the panacea or windfall many seem to think. There are plenty of questions that only experience and administrative rulings will clear up.

• **New Rules**—Here, generally, is what the bill provides:

Management can, if it wants to, use what is called the double rate (or 200%) declining balance method to compute its depreciation. This applies, however, only to brand-new—and not to slightly used—plant or equipment purchased on or after Jan. 1, 1954. Capital assets already on a company's books prior to this year continue as before.

The new method is somewhat more complicated than the straight-line system now in general use. Take a screw machine. The government figures its average useful life is 20 years. Under present regulations, that means a company can deduct the cost (say, \$10,000) from its taxable income at the rate of 5% a year—or \$500—for 20 years.

Using the 200% declining balance method, the company doubles the 5% depreciation rate, so that the first year it can write off \$1,000 of the \$10,000 original cost, leaving an undepreciated balance of \$9,000. The second year it writes off another 10%, but this time using the \$9,000 as a base. In other words, it gets a \$900 deduction. This process goes on for the full 20 years. At the end of 10 years something over \$6,500—or two-thirds—of the \$10,000 cost has been depreciated. Under the straight-line method, only \$5,000 would have been recovered.

By the eighth year, though, the amount of yearly depreciation allowed by the declining balance method is lagging behind the \$500 annual deduction under the straight-line method. At the 20-year point, the new method gives you only a \$135 deduction.

What's more, under the declining balance system you don't write off the full cost during the machine's estimated useful life. On the screw machine, at the end of 20 years there is about \$1,220 left that hasn't been depreciated, or about 12% of the original cost.

• **Selling Point**—Still, the method proposed in the bill does one important thing: The largest share of your depreciation comes in the very early years.

Because of that, the depreciation change at first glance has lots of appeal, especially when management looks back on the past few years of inflation and high taxes.

To small companies, often chronically short of capital, the fast write-off could be a big advantage. It would enable them to recover their capital much sooner, thus partly solving expansion financing problems.

• **Two "Its"**—Even so, many top financial officers are still not sure what their decision will be if the law is changed—to use the new method or stick with the old.

Their decision will come after they

make up their minds on two major economic questions:

• Will there be inflation or deflation for the years ahead?

• Are taxes going up or down?

If you decide inflation is here to stay, then your best bet may be to use the faster write-off. That way, you'll be recovering dollars—possibly for further capital outlays—that are closer to the value of the ones you spent; and you'll be getting larger tax deductions in the early years of your investment when the dollar is worth more.

But suppose you figure that tax rates will go up sharply. Perhaps you see the possibility of another Korea—and something akin to excess profits tax. The equipment you buy today may have been largely written off when taxes were, say, 50%. A new Korea-type economy with sky-high taxes might arrive at a time when your depreciation deduction had been used up. Theoretically, you would be losing out because of the tax situation.

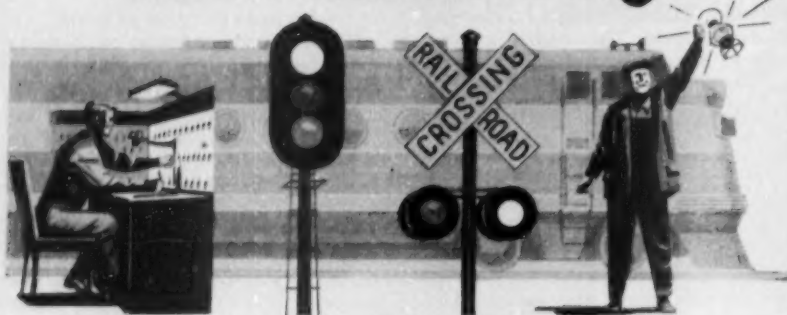
• **One Example**—Take the case of United States Steel Corp. During World War II, it amortized practically all its emergency facilities through the special five-year amortization allowed by the Treasury. That was fine for the first part of the postwar period, when the wartime excess profits tax was dropped. Then came Korea, a burst of new inflation, and another EPT. Much of Big Steel's World War II installations (on which something like \$360-million had been recovered through fast depreciation) was already written off. Thus, the company was paying considerably higher taxes from the income the equipment was earning than it would have paid had it still been writing off that equipment under normal depreciation.

Of course, you have to calculate what happened to the value of the dollar between 1941 and Korea. When you do that, it turns out Big Steel's rapid write-off was no mistake. Through the fast depreciation, it got back its investment in dollars that were worth more than those it would have been getting in the Korean war period under normal rates. What it had to pay out in higher taxes in 1950-1953 was pretty well balanced by the cheapness of the dollar.

Besides, as Robert C. Tyson, vice-chairman of the finance committee, says: "It's our policy to get back our investment just as rapidly as we can. It's just good business." U.S. Steel is one of about 50 companies, according to an American Institute of Accountants' survey, that in the past have used accelerated depreciation for accounting purposes, even though they could not deduct that depreciation for taxes.

• **Worries**—Not all management is ready to accept the faster write-off under

Rock Island Freight



is on the *MOVE!*



The 14 states directly served by the Rock Island Lines are vital units in our national economy. To serve these states is a Rock Island *must*. It's a job we are proud to do. **ROCKET FREIGHTS** help to provide a service that assures fast schedules, on-time deliveries and dependable performance. But Rock Island goes beyond this. With the cooperation of connecting lines, freight originating in the Rock Island states reaches every city and hamlet in America and even far-away lands. Conversely, this service enables the Rock Island to bring to its 14 states those things from the "outside world" that make for growth, progress and a more abundant life.

For freight information consult any Rock Island representative



ROCK ISLAND LINES

The Road of Planned Progress

Directly serving Arkansas, Colorado, Illinois, Iowa, Kansas, Louisiana, Minnesota, Missouri, Nebraska, New Mexico, Oklahoma, South Dakota, Tennessee, Texas.

the proposed revision. Some are worried about the more complex accounting involved. Others are going to sharpen their pencils and do some long-range forecasting of capital spending plans and their timing before deciding.

Besides, some big companies aren't sure they like the declining balance method. In the past, the government has sometimes allowed companies to use this method, but with a rate only $1\frac{1}{2}$ times the normal. This left an undepreciated balance at the end of a tool's useful life of something like 20% of the original cost. Now, the double rate permitted under the revision cuts that undepreciated balance to about 10-12%.

• **More Flexibility**—There is a hidden advantage in the proposed law. Under current practice you have to take into account salvage value. In effect, the original cost of capital goods has to be reduced, when figuring depreciation, to about 10%—the assumed salvage value. The new rules would ignore any salvage factor and your double rate declining balance method would be figured on the full \$10,000 original cost.

Companies leery of declining balance systems now have an out. The revision is flexible and allows the use of any method that doesn't exceed the write-off permitted under the 200% declining balance. It's still to be determined, probably administratively, but it presumably means that a company could use a combination of rates on the straight-line method, writing property off faster for the first years, then cutting the rate later on.

Organizations such as the Machinery Allied Products Institute, representing the durable goods industry and interested in promoting more realistic depreciation, point out that management can't ignore any system that permits a faster write-off, regardless of ifs and buts. The faster write-off (1) cuts the risk in the early years; (2) lets you recover your money when the equipment is bringing you its biggest return, thus giving you more of a tax deduction at a time when earnings from the equipment are highest; and (3) allows you to take back your dollars when they are available, rather than speculating on some unknown future.

• **Assets Column**—Beyond providing a faster write-off, the proposed bill:

• Allows business to get from the Internal Revenue Service an agreed-on rate that won't be changed.

• Prohibits the government from questioning management's estimate of a piece of equipment's life—which determines the rate of write-off if that estimate is within 10% of what the tax department considers proper.

• Lets a company use the new write-off system selectively—on a capital account here but not on one there.



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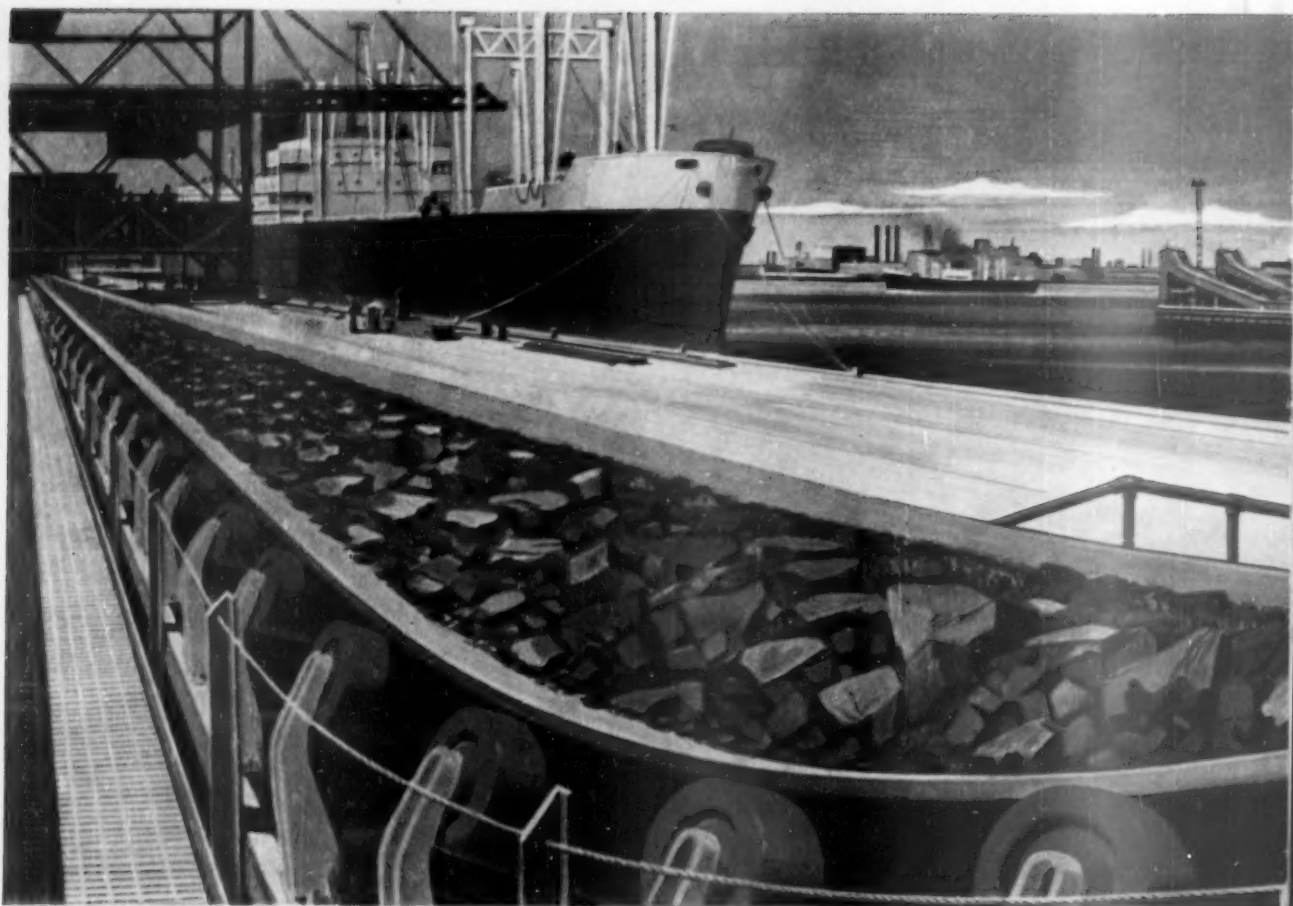
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Complicating factor was the high value of the waterfront property to be used. This confined construction to a long, narrow, "finger" pier which eliminated the usual method of looping the gondolas out and under the unloading machines. Shuttling the cars back and forth spelled too much down-time for the big buckets. Finally the engineers thought of a conveyor belt and, automatically, the G.T.M. — Goodyear Technical Man — came to mind.

Could a conveyor do the job was the big question. They wanted to dump the ore directly onto the moving belt. This meant large lumps — weighing as much as 300 pounds each — would crash down from a height of about six feet. Then, too, they wanted a single length of belt to carry the heavy load from the end of the pier up the 80 feet to the top of the car-loading house. Although the drop, the tonnage and the lift were beyond the

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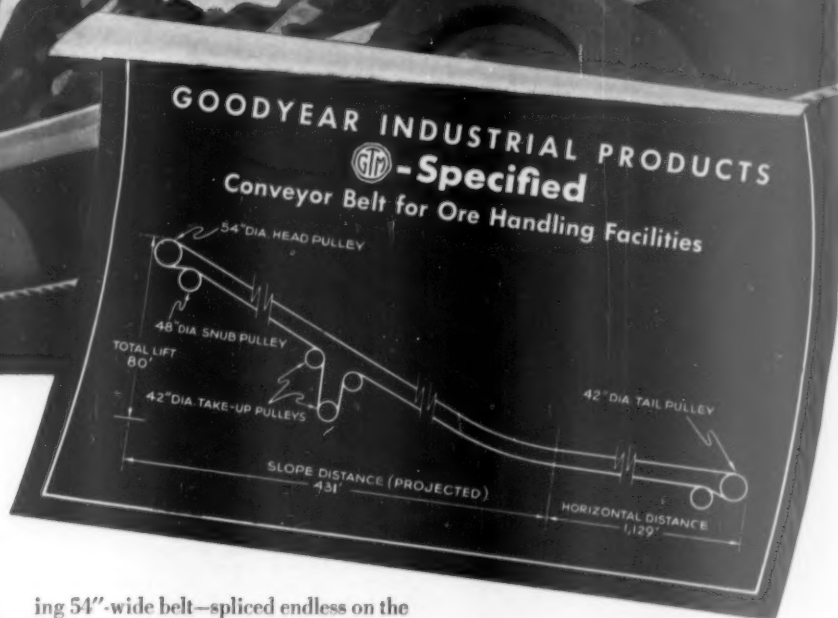
capacity of any fabric-reinforced belt, the G.T.M. found the answer.

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ing 54"-wide belt—spliced endless on the job site—extends almost 1600 feet from end to end—carries over 3,300 tons per hour at 500 feet per minute—can be powered to move up to 5,000 tons per hour—can unload a 30,000 ton carrier in a matter of hours.

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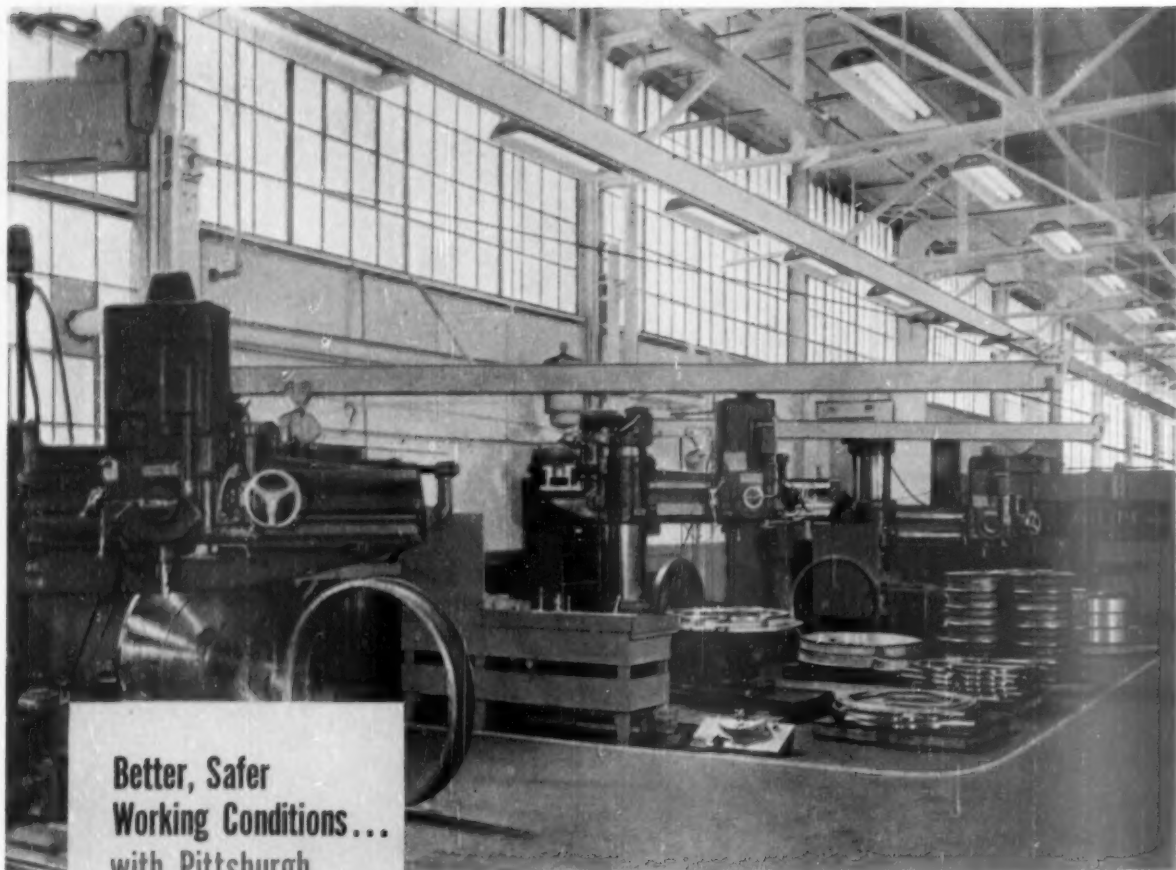


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Fawick Airflex Division, Federal Fawick Corporation plant in Cleveland, Ohio, looks clean, bright and pleasant three years after being painted according to COLOR DYNAMICS.

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to permit the operator to see his job better. Safety colors were applied on operating controls, mobile equipment and traffic lanes to increase safety.

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the Way
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Divide Up...**

**Nonproblem
Drinkers**

The bulk of social drinkers, 80-million people, are here: anyone who takes more than five or six drinks a year. They are not considered heavy drinkers in their group.

**Problem
Drinkers**

These drinkers have discovered and are making full use of the pampering effects of alcohol. Here are the symptoms in the order they generally appear:

- (1) Abnormal drinking behavior, not always in quantity, but in attitude. They go beyond their group.
- (2) Blackouts—loss of memory of the night before, not passing out.
- (3) Gulping and sneaking drinks.
- (4) Severe and chronic hangover.

**Early-Stage
Alcoholics**

These heavy drinkers, 3-million of them, have crossed the line to alcoholism. In virtually all cases, the only cure for them is abstinence. The progressive symptoms get worse:

- (1) Loss of control. They say they "can take it or leave it alone," but they can't.
- (2) Alibi system. There are plenty of excuses available. Example: "I'm expected to drink in my business."
- (3) Eye-openers. The old hair-of-the-dog for hangover cures.
- (4) Changing the pattern, trying the "beer route" or wine. But not for long.
- (5) Antisocial behavior, solitary drinking. In the jargon, these are "loners."
- (6) Loss of friends, jobs.
- (7) Medical aid sought.

**Later-Stage
Alcoholics**

The alcoholism-with-complications stage has arrived for about a million people. Progress through the stages becomes more rapid. Symptoms become more glaring:

- (1) Benders—several-day drunks.
- (2) Tremors.
- (3) Protecting supply—the bottle-hiding stage.
- (4) Unreasonable resentments.
- (5) Nameless fears and anxieties.
- (6) Collapse of alibi system.
- (7) Surrender process.

→

**...and
Here's What
Businessmen
Can Do
About Them**

No problem. These people generally can handle their liquor. It rarely interferes with their work.

Here's the toughest problem. Not many people outside of family, friends, and close associates know how heavily these people drink. They are not alcoholics—but many of them will be. Trouble is, it will really get to them when they are 35-50 years old, when the company needs them most.

Many companies are having success in curing drinkers in this stage. Company experts and outside clinics are used. But there are still difficulties: supervisors cover up; management is afraid to touch the situation; the drinker himself won't play ball.

You won't find many of these in the work force. They are too far gone to hold down a job.

Data: Yale Center of Alcohol Studies.

©BUSINESS WEEK

The Drunk: He's Management's Baby

"Alcoholism is confined to management: It's a management problem."

That's how Dr. Robert C. Page, general medical director of the Standard Oil Co. (N.J.), sized up the over-indulgence situation before the third annual Problem Drinking and Industry conference, held in New York last week.

Dr. Page didn't mean that the top brass are a rollicking band of drunks, or that no one except a vice-president or two is "on the sauce" and suffers from hangovers. He meant that a company program to combat problem drinking—either among the rank-and-file, or management itself—must be originated,

sold all down the line, and carried out by management.

• **Aid Programs**—Since World War II, several companies have gone far in trying to help their problem drinkers. Among them, Eastman Kodak Co., E. I. du Pont de Nemours & Co., Consolidated Edison Co. of N. Y., Inc., and Allis-Chalmers Mfg. Co. (BW-Feb. 18 '59, p. 116).

These companies have recognized alcoholics as sick—not morally corrupt—individuals. They have recognized that many can be cured, and that the company can assist in the curing process. Their results have been impressive:

sometimes as high as 80% cures among those treated.

But the surface has barely been scratched. According to a "conservative estimate" made by the Yale Center of Alcohol Studies (above), business and industry employ 1,650,000 full-fledged alcoholics whose out-of-control drinking keeps them off the job a total of 36-million workdays a year. In addition, there are millions of abnormally heavy drinkers, people who drag through millions of unproductive hangover days as "half-men," alienate customers when they are "low," make serious mistakes, get into accidents, and, worst of all,

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• **Why They Balk**—What is it that keeps so many companies from going after the drinking problem? At the conference, experts from industry, medicine, and science were ready with a jug full of answers.

Ralph M. Henderson, field representative for the Yale Center, started it off. He cited five reasons why management often avoids the issue:

Tam O'Shanter. There is still a widespread belief among management, as among the public, that alcoholics are weak-willed, morally disgraceful, disgusting characters. These management men say, "If we do find a lush, we fire him, but fast." But, as Henderson points out, by the time an alcoholic is flagrant enough to be discovered and fired, he's usually a veteran employee with over 20 years' experience. Both the employee and the company have a large investment in each other after 20 years.

Stereotype. There is a preconceived idea of what the alcoholic looks like. He is seen as a Skid Row bum, a neurotic genius, a Lost Weekender, or a comic in a dress suit. The idea is wrong. Most alcoholics, particularly those still holding jobs, show few outward signs of their illness. When they are drunk or severely hungover, they keep out of sight.

Personal rights. Many executives rationalize that a program to reduce problem drinking would be "meddling with a person's rights." This is the "it's none of my business if Joe Doakes wants to get loaded every weekend" attitude. Of course, the fact remains untouched that Joe stays home. Monday with a "cold," and muddles through Tuesday, doing virtually no work. The unions, incidentally, almost always help to combat alcoholism.

Clean slate. Many a plant manager has told Henderson "there's no alcohol problem here—just look at the record." Henderson says he doesn't have to. There's no paper record of Joe Doakes' hangover, or of his bad Tuesday. There is, perhaps, a record of his Monday "cold." Henderson says the cold incidence runs very high on Mondays.

Noncombatants. A great majority, management and the general public included, don't want to get involved in "the liquor question." When group control of drinking is suggested, many think they are being asked to take sides in the old war between the wets and the dries. Actually, none of the leaders promoting control of problem drinking in industry are promoters of abstinence—except abstinence for alcoholics.

Many plant managers have asked Henderson how he knows there are alcoholics in his plant.

Henderson says there are alcoholics



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and incipient alcoholics as sure as there are people with any other problems. The number, however, will vary.

Dr. Selden D. Bacon, also of Yale, says that if the plant is in a small town where drinking is really frowned on, alcoholism will be relatively light. The folks that really want the stuff migrate, probably to industrial areas where drinking is condoned. Secondly, if the plant employs a large number of women, problem drinking will be lower than average. The Yale Center estimates only one alcoholic out of six is a woman. There are differences stemming from geographic origin, too. There are fewer U.S. alcoholics of Southern European, Asian, or Hebrew descent, than there are of, say, Scandinavian or Anglo-Saxon descent.

Finally, age makes a difference. Most male alcoholics are between 35 and 50. The reason for this is that it takes time to become an alcoholic. A fellow who enters the problem drinking stage (see chart, page 103) in his early twenties, will not generally be a flagrant alcoholic until 15 to 18 years later. If he moves into the problem drinking stage in later life, however, say when he's 35, the running of the course will take a shorter time, perhaps only eight years. Women move through the stages much more rapidly than that: five to seven years as a rule.

• **Peak Age**—The fact that most of the nearly 1,700,000 alcoholics in industry are between 35 and 50 explains why the problem is so serious in many companies. These people are at the age, or nearing it, when the most is expected from them. They may be about to be promoted to a key position, or they may already be in one. As speakers at the conference pointed out, they may be anybody from the chairman of the board on down. Alcoholism plays no favorites as to financial standing, intellect, physical skill, or social standing. It is present in from 3% to 6% of the average work force.

One of the most efficient cure instruments for alcoholism lies in the fact that most of its victims are in the 35-50 age group. Traditionally, an alcoholic has been considered to be unapproachable for cure purposes until he has gone through all the stages, surrendered, and hit bottom. Then, at last, he will be self-motivated to allow himself to be helped, and psychiatrists and ex-problem drinkers agree that self-motivation is a must: No alcoholic can be led unwillingly away from liquor.

• **When to Start**—How far down this "bottom" is varies from individual to individual. To one it may mean the arrival on Skid Row, to another the loss of friends. But if a company were to wait until a man hit bottom before it got him started on a life-long trip

on the water wagon, it would have to put up with a lot. So, psychiatrists have come up with the idea of substituting a "false bottom." This works particularly well with the alcoholic employee with 20-odd years' experience with the company. Here's why:

The man is generally in his forties. He's strongly attached to his job and to his associates. He knows he's not very mobile, so far as changing jobs is concerned. The entire group of associations he has formed through the years at the company are not something he will give up easily. The false bottom that is shoved beneath him, therefore, is threatened discharge.

This system has been employed successfully at Consolidated Edison. An alcoholic is placed on probation, and—this is a simplification of a careful, extensive examining procedure—is warned that another drinking offense will result in his dismissal. At the same time, the company tells the drinker that it stands ready to help him.

• **The Helping Hands**—Help comes from within Con Edison's medical department, from Alcoholics Anonymous, and from the Consultation Clinic for Alcoholism at the University Hospital of the New York University-Bellevue Medical Center. The clinic has been sponsored for the past two years by Con Edison and, later, by Standard Oil, primarily for their own use, but any other company may send employees to it at a moderate cost.

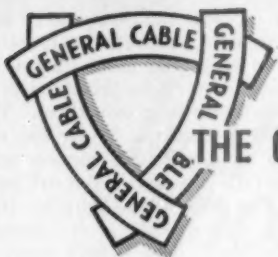
Dr. A. Z. Pfeffer, the psychiatrist who heads the clinic, told the conference that no "pet cure" for alcoholism is used. Of course, the causes for drinking are sought. As these are often psychoneurotic in nature, the job is hardly one for amateurs.

Basically, in lay language, the clinic employs four methods, depending on the case; (1) individual, directive psychotherapy; (2) group therapy; (3) Antabuse, the drug that makes a high-ball taste terrible (this is used only in conjunction with psychotherapy); (4) Alcoholics Anonymous.

Many other companies, including the New York Telephone Co., have already made use of the clinic.

• **Difficulties**—For most companies, however, anything as carefully devised and tested as the Con Edison plan, or similar plans at Allis-Chalmers, or at du Pont, are a long way off. And the speakers at the conference warned that there are many pitfalls for those who start to install plans. They noted that a traditional employee propaganda campaign—posters, pay envelope stuffers, and the like—may backfire if it is used prematurely.

First, to most people who have never been emotionally or professionally connected with problem drinking, it is often amusing. People laughed during



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many of the most desperate scenes of the film, *Lost Weekend*. Poster or leaflet campaigns, clumsily going after the problem and presented to personnel cold, have received the horselaugh in more than one plant. Secondly, personnel won't take preaching or exhortation from those over them. The non-problem drinkers, by far the majority, will mold a general opinion against an unsubtle program—and it will lay an egg.

• **The Yale Plan**—Actually, the problem is as delicate as any management must face. And it isn't made simpler by the fact that management itself is usually laced with its proportion of problem drinkers. To assist companies, the Yale group has worked out what it calls the Yale Plan, which is a synthesis of what the group thinks are the most workable ideas in use in industry.

The Yale Plan has several parts and is constantly being altered. But simply it says: Start at the top, fix responsibility on a particular department (medical, personnel, or safety), and indoctrinate all the way down to the foreman-supervisor level of management. Two basic themes must prevail and must be understood by all: Alcoholism is a disease, not a moral weakness, and we stand ready to help, not to punish.

• **"Cover Up"**—All speakers at the conference placed particular emphasis on the importance of indoctrinating the foreman and supervisor. He's the management man who sees a worker regularly and is the only man who can destroy a "cover up" situation.

The "cover up" is the reason plants believe they have "no alcohol problem." It's the reason pre-alcoholics, generally thought to be social drinkers by most of management, turn up as 24-karat tosspots when they are about 40.

As Dr. Page pointed out at the conference, everybody covers up for the big drinker. His wife reports him "sick with a cold" on Monday morning. His doctor, observing professional ethics, keeps it under his hat. The fellow at the next desk or the next machine doesn't say a word, even "carries" him on his bad days. And the supervisor, who knows he really puts out—except for perhaps 30 or 40 days a year—just lets the thing ride. All of these loyalties and combinations to outwit management do a very efficient job of keeping the alcoholic or incipient alcoholic in disguise.

Unfortunately, Dr. Page says, they also do a very efficient job of speeding the problem drinker on his not-so-merry way to alcoholism.

There is one heartening fact: Dr. Page says alcoholism, which rose steadily through the 1940s, seems to have reached a plateau and may be starting to decline.

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Northwest Squall

Harris resigns after year's tenure, and stockholder group restores former policy.

Harold R. Harris, president of Northwest Airlines, Inc., quit last week because of policy differences, which he said arose with "a group who control a majority of the company's board of directors."

As chief executive, he barely got a chance to issue his one and only annual report. Harris, formerly a Pan American executive, took over Jan. 1, 1953.

Under Harris, the company was making money. Its operating revenue last year amounted to \$61-million and operating net after taxes \$1.3-million, boosted to \$1,697,000 from sales of planes and parts.

• **Squeeze Play**—What happened? The company says only that it accepts the resignation "with regret." Apparently Harris, as a professional management man, got caught in a squeeze when a group controlling a large share of Northwest stock decided his policies weren't paying off fast enough.

Northwest has 800,000 shares outstanding—of which 200,000 are said to be owned or controlled by Wertheim & Co., and 135,000 by Merrill Lynch, Pierce, Fenner & Beane. It is reported that many of these shares were stacked against Harris because stockholders were unhappy with a company whose asset value was twice its market value.

When he became president, Harris started a major overhaul of the company, which had a tough time in the postwar period (BW—Jun. 20 '53, p70). It's these policies, some of which obviously would require capital outlays, that the Wertheim group objected to.

• **Down the Drain**—Changes have already started. Trade circles say that Northwest now wants to get out of its contract with Lockheed Aircraft Corp. for the purchase of six Super-Constellations. Plans for a new Northwest overhaul base in Minneapolis are apparently being abandoned. The New York executive office that Harris set up is being eliminated. On top of this, a memorandum junking Harris' organization shifts has been issued. The separate foreign and domestic divisions are being dropped and replaced by four geographical regions.

Malcolm S. Mackay, executive v-p, replaces Harris as administrative head.

Muntz Bankruptcy

Muntz TV, Inc., is in deep trouble. Last week, a petition for involuntary re-

organization under the Federal Bankruptcy Act was filed in Chicago federal court.

The court appointed two trustees to undertake the reorganization. Earl W. Muntz himself, 39-year-old president who became known as Madman Muntz when he broke into business as a West Coast auto dealer (BW—Jul. 25 '53, p99), stays on under the trustees with one other company officer.

• **Troubles**—Creditors petitioned for the reorganization of Muntz TV and two subsidiaries because, they said, the companies had assets of \$3-million and liabilities of an equal amount. In addition, they claimed a contingent liability of \$10-million to repay finance companies for defaults on TV set installment payments.

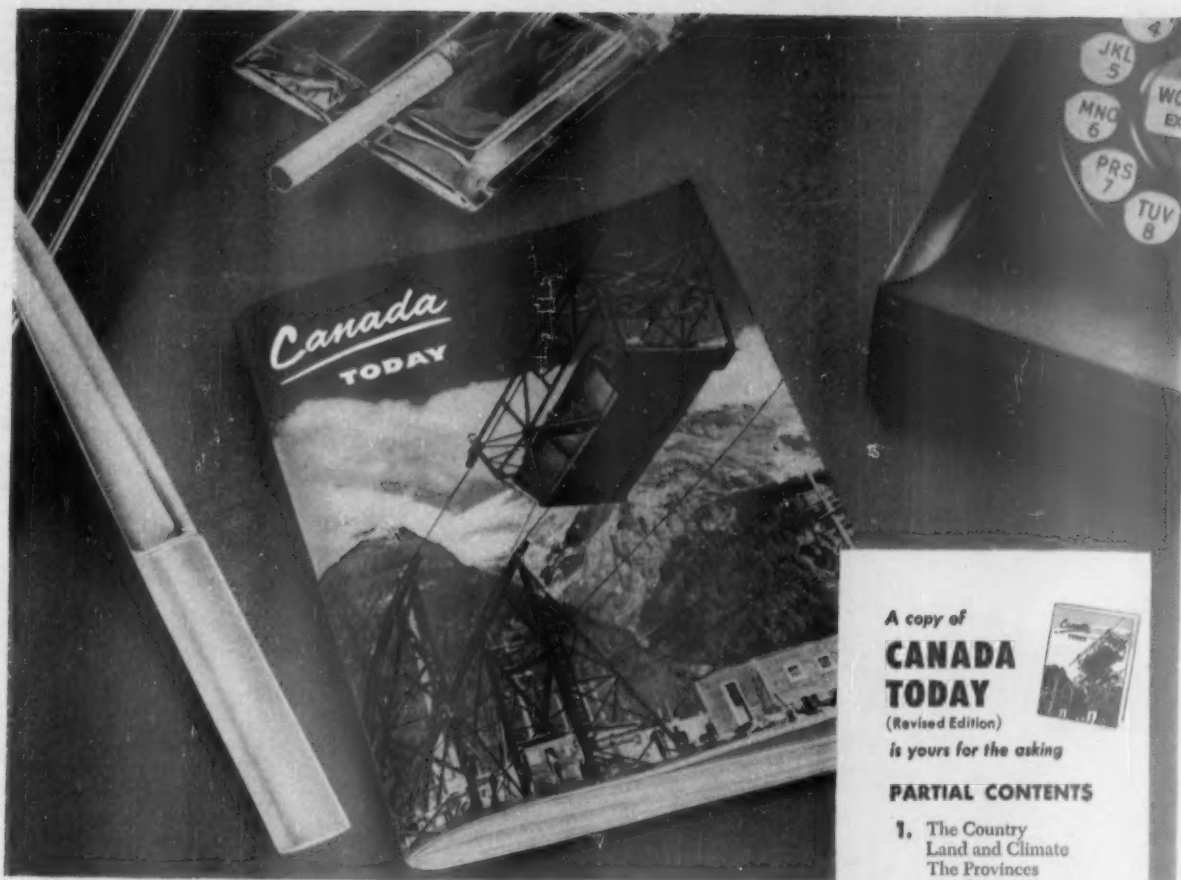
They blamed Muntz's trouble on customers' desire to wait for color TV and on the impact of the general economic decline on TV sales. Muntz himself said losses resulted from a high incidence of repossessions, especially in southern areas, and on unprofitable operations in some branches. Muntz sells through its own company-owned branches rather than through distributors and dealers.

MANAGEMENT BRIEFS

• **GE windfall:** Later this month, more than 42,000 General Electric employees will share \$233,000 and more than \$1-million in GE stock. These are the first returns under a plan whereby an employee buys U.S. Savings Bonds through payroll deduction, leaves them on deposit with the company for five years, then receives the bonds and a stock bonus equal to 15% of their purchase price. The \$233,000 represents accumulated dividends from the stock.

• **Reading on company time,** not comic books, but trade publications, bothers Electronic Engineering Co. of Calif., but because it thinks such reading is valuable, it will pay two-thirds of the subscription price of a selected list of business papers and trade publications—if the employee will have the magazines sent home.

• **Operations Research**—how scientific methods may be applied to solving industrial, business, and government problems—will be the subject of a two-week summer program at the Massachusetts Institute of Technology, June 16-19. A similar symposium, which is to be sponsored by Midwest Research Institute, will be held Apr. 8-9 in Kansas City, Mo.



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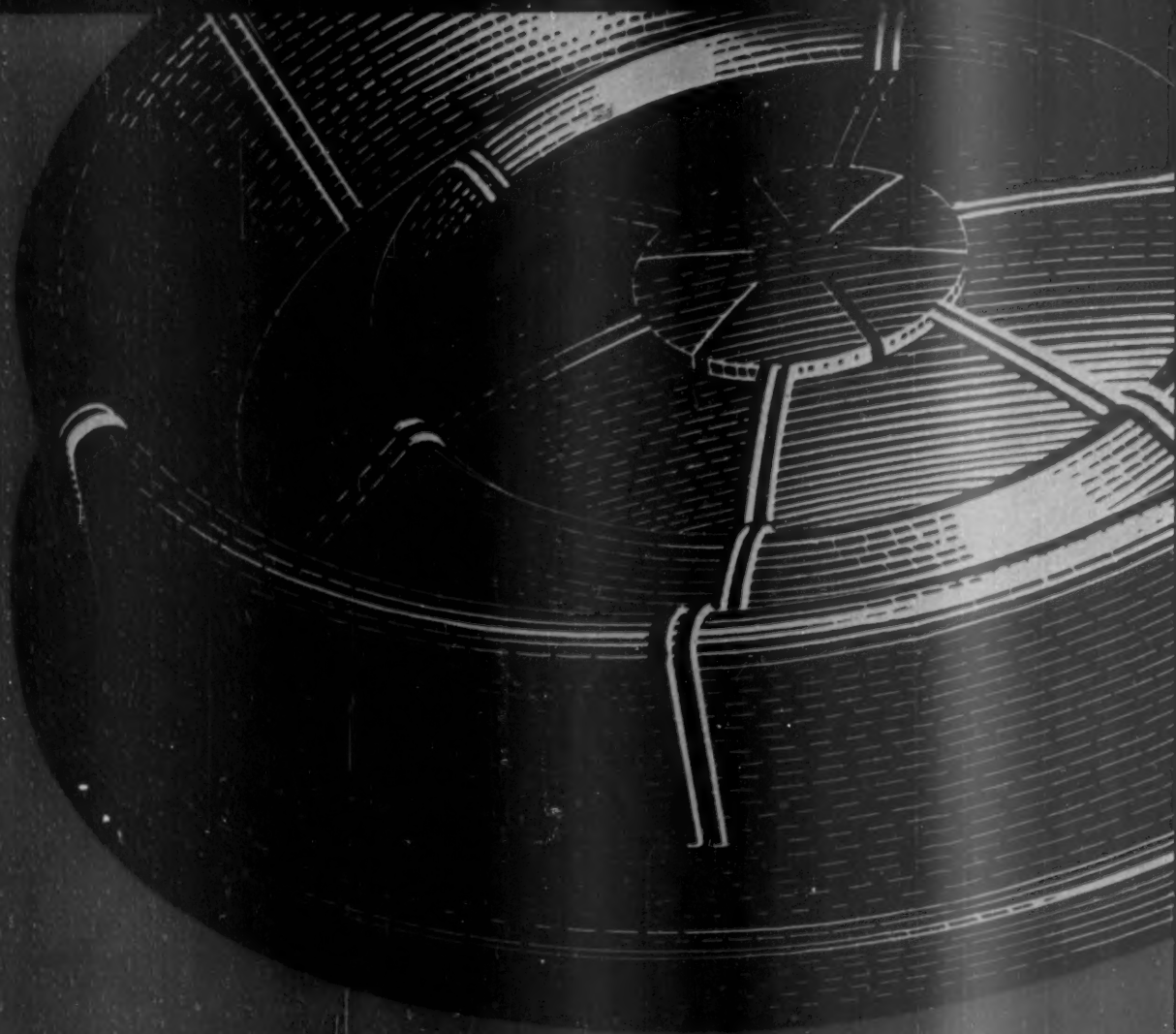
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ECONOMICS

Here are some of the things you need to know to tell how the economy is doing:

Here is what the best available figures tell you about them:

But . . .

What is the total economic activity?

Output of goods and services is now at a rate of \$363.5-billion per year, down \$7.9-billion from the second quarter of 1953.

This figure is getting farther all the time from the census on which it's based. It's still fairly good but will become almost meaningless unless there's a new census soon.

How many people are out of work?

Unemployment is 2,359,000 according to one series, 3,087,000 according to a new series. The old figure is 459,000 higher than a year ago; no one knows how the new figure compares.

The old figure is too low, the new one probably too high. Both are based on dubious samples.

What is the output of factories?

It's off 10% since the downturn last July.

This FRB index is one of the best and was updated just last December.

How much are consumers buying at the stores?

They're buying 5% less than the peak figure last July, when you adjust for seasonal differences.

The only good figures are from department stores. Others lack breakdown by regions and types of stores.

Are inventories held by factories and stores getting bigger or smaller?

They're getting smaller — down 10% since July.

This is a rough estimate only — despite the fact that Administration economic policy is based on inventory trends.

How much are consumers spending and saving?

They're spending freely, at a \$230-billion annual rate, down only \$1-billion from the third quarter last year. In the meantime, their savings are up \$500-million.

These estimates are the most flimsy of the really key figures. They're not backed up by field surveys, though SEC is now improving the savings estimates.

Is construction holding up?

Yes — in fact it's up slightly since July, when adjusted for seasonal changes.

The industry has long complained that it has the worst statistics of all. A Census Bureau study group calls them spotty, incomplete, confusing.

What's the trend of foreign trade?

December figures — the latest — show exports are holding up, but imports are dropping somewhat.

The reports are so slow that their usefulness is greatly reduced. Repeated budget cuts have hampered publication of findings in really usable form.

U.S. Statistics: A Hollow Shell?

On the desks of some top U.S. economists are these words, spelled out in red plastic letters: "Statistics are only the shadow of a fact."

For 14 years of war and boom, the words were only a sobering reminder of professional responsibility. Suddenly, they have become a haunting challenge: Do U.S. statistics accurately portray what is happening to the U.S. econ-

omy? Or is the shadow a distorted one?

• **Unemployment Doubts**—Even the recession tremor of 1949 did not raise any doubts about the fundamental accuracy of U.S. statistics. But with the present downturn scarcely eight months old, and no deeper than the 1949 dip, doubts are creeping in.

They began with unemployment. At first, the Administration laid these

doubts to politics. Officials insisted Democrats were merely trying to win votes by questioning the accuracy of the count of unemployed. But last month Secretary of Commerce Sinclair Weeks revealed that the count had been based on a survey method 10 years old, probably inadequate now, and that a trial survey based on a new method indicated unemployment might be about

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CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

"... government statistics
had plainly begun to curl at
the edges ..."

STATISTICS starts on p. 113

728,000 higher than previously reported (BW—Feb. 20 '54, p. 29).

• **Frontal Attack**—Now the whole structure of federal statistics has been examined in a critical report by a group of experts from private life. What they found was disconcerting.

In a report to the Secretary of Commerce on Census Bureau programs, they warned of the "erosion" and "attrition" of federal statistics. They described a "disturbing record of retrogression." They predicted that the most important series of all—the one measuring total output of goods and services—might soon become a hollow shell. They called for a sharp reversal of budget policies that have buffeted and damaged key programs.

The nine-man committee included economic analysts from Standard Oil Co. of Indiana, General Motors, Federated Department Stores, Inc.; Young & Rubicam, Inc., advertising agency; and the National Shoe Manufacturers Assn. It was headed by Ralph J. Watkins of Dun & Bradstreet, Inc.

• **Boomtime Complacency**—Even before this report came in, government statistics had plainly begun to curl at the edges. In addition to doubts on unemployment figures, questions were being asked about construction, inventories, consumer spending, and foreign trade that could not be answered.

It's easy to see what happened. During the boom, federal statistics were accepted casually, as happy proof of what everybody knew anyway—that the economy was doing very well. A jiggle here and there in some particular series didn't matter. A few top-level professionals—in government and in business—sounded warnings (BW—Jun. 13 '53, p. 112). But they went largely unheeded.

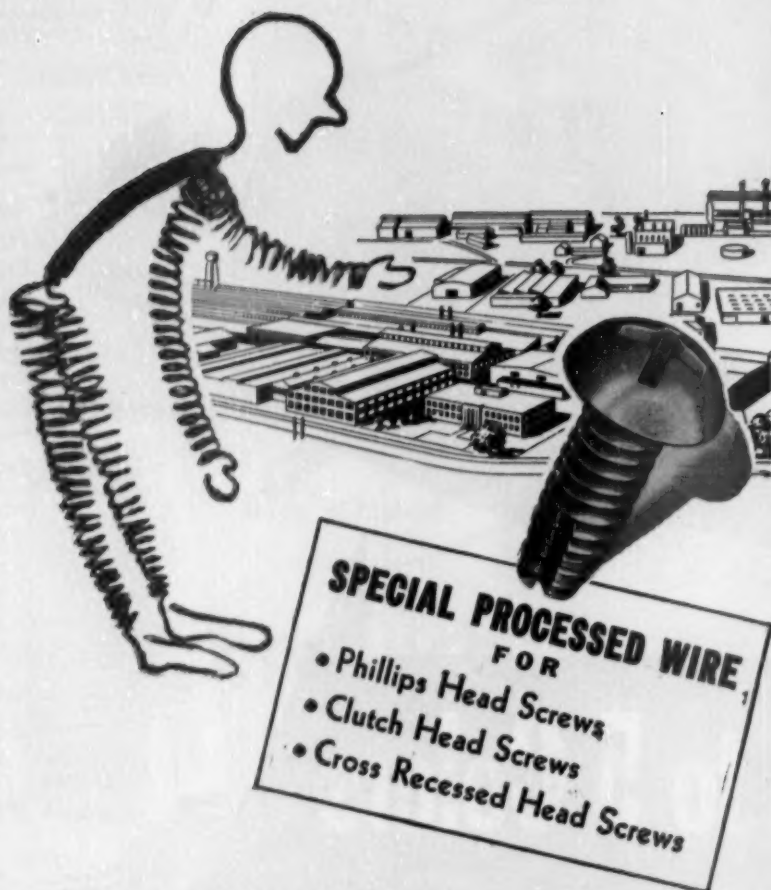
Now business and the Administration are discovering that in one area after another, the fact-gathering programs laid out before the Korean War, or even earlier, are inadequate for today's needs.

• **Root of the Trouble**—There are three reasons why statistics as now gathered do not supply the answers needed for policy guidance:

The economy has simply grown away from our statistical guideposts. The controversy over unemployment is only one example. Ten years ago, a spot check in 68 areas gave a reasonably accurate estimate. The new, experimental survey goes into 230 areas.

The total national output of goods and services (GNP) has quadrupled, and

[illegible]



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"... ideas for improvement have died in the Budget Bureau or in Congress ..."

STATISTICS starts on p. 113

population has grown 30-million, since the last comprehensive survey of the minerals industries in 1939.

Even since 1948, the last year in which fact-gathering programs were given a broad scrutiny, GNP has jumped more than \$100-billion a year, a 40% rise. Population has increased 15-million.

We are asking much more of our statistics than ever before. The rough guideposts of the past simply aren't good enough to serve the complex needs of March, 1954. The Employment Act of 1946 pinned responsibility for a high level of business activity on government. That's what Eisenhower had in mind when he said the current month would indicate to him whether the Administration's current economic policies were sufficient. And the task of private decision-making has been enormously complicated by technological change, population growth, and market shifts.

The basic statistical programs have been starved for funds. Some have been denied any money at all, others reduced to an inefficient level. Ideas for improvement, forwarded consistently by the statistical agencies, have died either in the Budget Bureau or in Congress.

I. Where the Figures Fail

Here is a rundown on the problems behind some key statistical series.

Unemployment. In general, Eisenhower administrators had a tendency to trim back the statistical agencies when they took office last year. But unemployment measuring is one case where—by midyear—Secretary Weeks decided a little more money had to be spent. He ordered the experimental survey, which last month resulted in the new—and 728,000-higher—estimate. Normally, the result of an experimental survey would not be announced until tested over several months. In this case, the results leaked, and Weeks was forced to publish figures before the statisticians were satisfied.

The major question about the new survey is whether the results were distorted by inexperienced canvassers. It is taken by ringing doorbells of 25,000 homes, which, in most cases, is done by housewives without formal training in survey work.

While the new program, and the new canvassers, are being tested over the next few months, policymakers are

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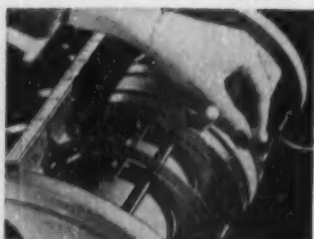
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left with a choice of 2,359,000 unemployed as estimated by the old method, or 3,087,000 by the new method—a 30% variance.

Housing. In the 1950 census, 4,300,000 homes were described as "dilapidated." In the meantime, 5-million new dwellings have been built. One group says that counteracts the first figure. Another group argues that most of the new ones have gone to higher-income groups, with very little reduction of the "dilapidated" group.

Housing statistics aren't good enough to supply the answer. There has never been a dependable, regular count of housing starts. The Bureau of Labor Statistics makes a monthly estimate that in recent years has been as much as 12% too low to 6% too high when final figures came in. One weakness has been inability to get figures from places where no building permits are required.

An improvement is promised for later this year. BLS managed to get \$95,000 approved by Congress last year to work up a better survey base.

Other construction. Never accepted by the building industry as accurate, these figures are probably worse today than ever before, due to inexperienced personnel. A new staff is gradually catching up, but even when it does the results won't satisfy critics in the construction business. They want some sort of estimates made on the rising "fix-up" end of the business. Repairs and modernization of dwellings is estimated all the way from \$4.5-billion a year to \$9-billion—from a third to three-quarters of the amount spent on new housing. But nobody in the industry or in government knows for sure. Secretary Weeks' committee reviewing Census Bureau programs talked about "confusion and guesswork" and about "misleading," "spotty," and "incomplete" construction statistics.

Inventories. The rate of decline here is the heart of the Administration's whole economic policy. It is counting on a quick reduction to bare-shelf levels, in the hope that replacement orders will start a business pickup. But the figures are officially described as no better than "rough estimates."

An improvement is promised on retail store inventories as part of a general look at retailing statistics. But preliminary results are discouraging. Reason: Many stores don't keep monthly figures.

Retailing. The Federal Reserve Board's department store index has always had a high rating, but there never has been a comparable series on other types of stores. Figures gathered by the Census Bureau have not been detailed enough to allow either regional or type-of-store breakdowns. A project now under way in the Census Bureau may lead to improvement, but meanwhile there is a general—and often misleading

They're buying an automatic washer...



they're helping to buy a machine tool — — —

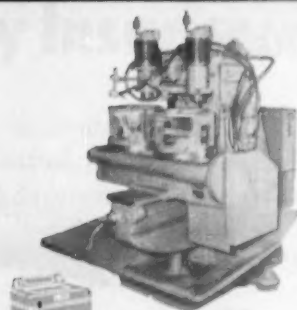
SO many American families like the results of automatic washers that their sales now top those of conventional washing machines. Yet few of 1953's 4½ million purchasers of washers, dryers and ironers realize that a small part of the price they paid helps buy the machine tools needed to develop even better home laundry equipment.

It's the same story when you buy cars, furniture and shoes . . . cigarettes, toys and canned foods. Modern machine tools are always needed to manufacture a new product or to develop equipment that makes an established product better or less expensive. Thus, a small part of today's price of any product must help buy tomorrow's machine tools.

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—tendency to use department store figures as a measure of retailing as a whole, just for lack of anything better.

Consumer spending and saving. These figures get a low official rating because they are not based on direct surveys. Spending is estimated by an elaborate process that starts with factory prices and then adds amounts for transportation costs, wholesale and retail markups, and sales taxes.

Savings are estimated by subtracting the unsatisfactory spending figure from a questionable estimate of income. Securities & Exchange Commission now supplies a personal savings estimate that is gaining standing.

Foreign trade. Inexperience of personnel has hurt quality in recent months, but budget cuts extending back for years have really crippled the program. In order to save money, it prints some of its detailed reports by an offset process from the original tabulation sheets. The result is almost unreadable.

II. Getting the Money

In 1948, when the Republicans were in control of Congress, they drew up a comprehensive reorganization of Census Bureau enumerations—the foundation of almost all U.S. statistics. This plan called for six major censuses this year and last, covering all major segments of the economy. But Congress has refused to vote the money. The Administration made a weak and vacillating defense of some of the censuses.

This attitude apparently is going to change. Spurred by the Watkins committee report, Secretary Weeks has requested the Budget Bureau to approve a special \$8.5-million appropriation that would be tacked on to the 1955 fiscal year budget. But even with the strongest kind of Administration backing, nobody in Washington would bet on what will happen if the request goes to Congress. The House Appropriations Committee has already rejected a modest request for \$650,000 to make spot checks of manufacturing and retail and wholesale trade.

The Watkins committee, in reporting to Weeks, stressed the importance of resuming the census programs as a means of keeping the month-to-month figures in some reasonable relation to actual events. The committee summed up this way: "... further neglect of the congressionally authorized census programs may reduce this gross national product edifice to a hollow shell. At best, that edifice of figures must be painstakingly built up from one set of estimates to another, and the farther we get from the solid bricks and stone and timber and steel of comprehensive census enumerations, the more fragile and uncertain our working materials become."



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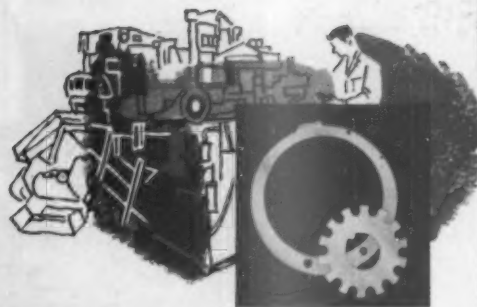
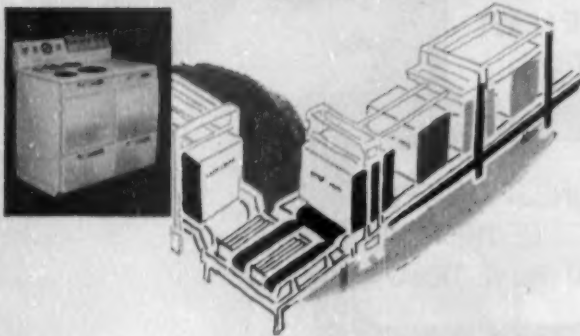
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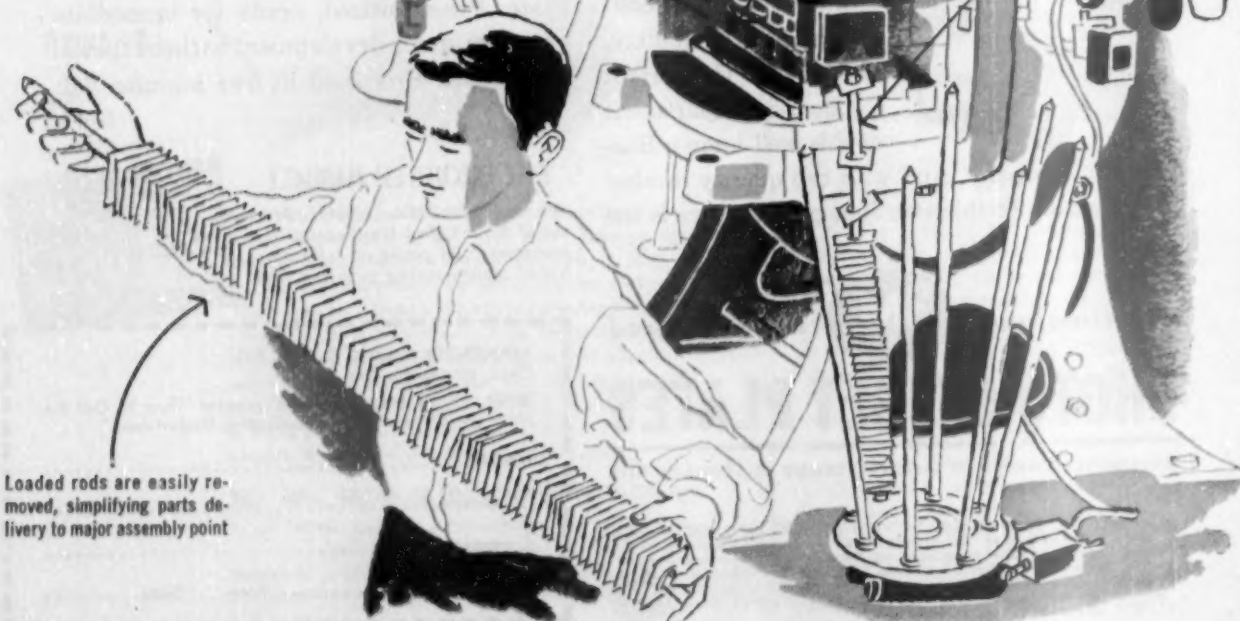
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Part of a complete line of equip-
ment for glass manufacturing,
Hartford-Empire I.S. Machine forms
bottles and jars at high speeds,
to highest quality standards

Coiled strip is fed
into die automatically



Loaded rods are easily re-
moved, simplifying parts de-
livery to major assembly point

automation that's down-to-earth

*is one of many ways Emhart companies
help customers boost product salability*

With each stroke V & O press
performs eight operations

Finished parts are stacked on rods
which are automatically indexed

Power presses with dies merely form metal items. But add mechanical feeding, transferring and assembling devices — as V & O is doing for an increasing number of companies — and power presses literally become factories in miniature. Integrated mechanical motions replace separate and scattered manual movements. Manhour productivity increases. The human factors in quality control are minimized. From the resulting lower product cost and better product quality, comes improved product salability.

The other Emhart divisions are equally skilled in knocking the supports out from under "solidified" costs. Henry & Wright Dieing Machines demonstrate every day that new and unexpected savings are possible in metalworking. Standard-Knapp, with its wide experience in packaging techniques, can help you realize new economies in packing and preparing your product for shipment. If you produce glass products, the outstanding equipment and resources of Hartford-Empire are available.

Emhart Mfg. Co.

Only the best is good enough

NEW LITERATURE

Check any product information
you want and mail this coupon to
any Emhart unit listed below . . .

☐ HENRY & WRIGHT



Division of
Emhart Mfg. Co.
510 Windsor Street
HARTFORD 5, CONN.

☐ HARTFORD-EMPIRE CO.



Division of
Emhart Mfg. Co.
HARTFORD 2, CONN.

☐ THE V & O PRESS CO.



Division of
Emhart Mfg. Co.
400 Union Turnpike
HUDSON, NEW YORK

☐ STANDARD-KNAPP



Division of
Emhart Mfg. Co.
PORTLAND, CONN.

GLASS

- | | |
|---|---|
| <input type="checkbox"/> Batch Chargers | <input type="checkbox"/> Forming Machines |
| <input type="checkbox"/> Feeders | <input type="checkbox"/> Lehr Loaders |
| <input type="checkbox"/> Lehrs | <input type="checkbox"/> Unit Melters |

PACKAGING MACHINES

- | | |
|---|---|
| <input type="checkbox"/> Unloaders | <input type="checkbox"/> Packers |
| <input type="checkbox"/> Rinsers | <input type="checkbox"/> Labelers |
| <input type="checkbox"/> Cartoners | <input type="checkbox"/> Case Cleaners |
| <input type="checkbox"/> Gluers & Sealers | <input type="checkbox"/> Palletizers & De-palletizers |

METAL WORKING

- | |
|---|
| <input type="checkbox"/> Henry & Wright Dieing Machines |
| <input type="checkbox"/> Henry & Wright "Press Load Calculations" |
| <input type="checkbox"/> Henry & Wright Case Histories |
| <input type="checkbox"/> V & O Inclined Presses |
| <input type="checkbox"/> V & O Notching Presses |
| <input type="checkbox"/> V & O Roll and Dial Feeds |
| <input type="checkbox"/> V & O Feed-O-Matic |

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY & STATE _____

NAMES & FACES



ECONOMIST ARNO JOHNSON:

He Sees the Sunny Side of the Future

Most economists predicted that business activity in 1954 would show only a slight drop from last year's record-breaking levels, and they're standing pat on this forecast. They rank as optimists, especially in comparison with those few economists who, like Colin Clark (BW—Jan. 30 '54, p84), have predicted a decline of 10% or more. But they are outdone by one or two super-optimists who are convinced that activity in 1954 will be higher than ever.

Perhaps the most intrepidly bullish of all is 53-year-old Arno Johnson (above), vice-president of J. Walter Thompson and director of its research.

Johnson flatly disagrees with the pessimists and near-optimists who forecast a decline based on a cut in government spending. As he sees it, consumer spending can more than offset this

drop. He is on record as saying that 1954 can show at least a 5% increase over 1953. Moreover, he musters some impressive facts and figures to prove that our living standards will rise a minimum of 33% over the next five years.

• **Spreading the Gospel**—Johnson's full-fledged optimism hasn't captured so many headlines as Colin Clark's full-fledged pessimism. But this is not the fault of Arno Johnson. He has just completed a cross-country tour, sounding his high note of bullish predictions before advertising and sales groups in cities like Boston, Pittsburgh, Denver, and Los Angeles. Over the next few months, he's scheduled for a new series of talks in Cleveland, Evanston, Syracuse, Washington, Miami, and other cities.

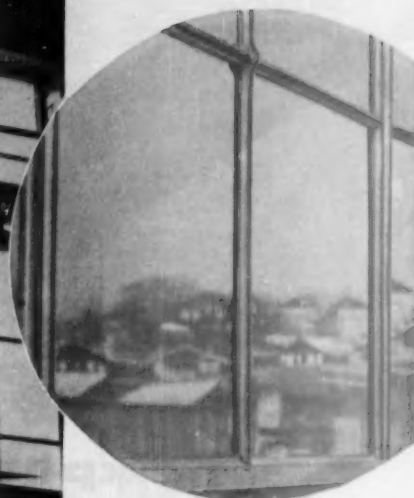
This extensive drum-beating interferes with Johnson's economic research, but he views the situation as one of putting first things first. Johnson is in the "psychological recession" camp—he believes we can talk ourselves into a severe slump. Thus, he considers his immediate role should be to counter bearish rumor with bullish fact.

• **Consumers First**—The reason Johnson puts so much faith in psychological reactions is his long-standing conviction that our economic destiny depends on the behavior of the consumer.

Consumers, he points out, have money to spend, but many of their purchases can be postponed. He feels that talk about recession tends to keep consumers from laying cash on the line. If this happens, he is sure that it will have a magnified impact on manufacturing.



"A salute to those who made it possible" *



Fenestra Steel Windows have spent 23 years in this cooking room of Wm. Underwood Co., Watertown, Mass. Close-up is unretouched.

How to make a habit of saving \$3,600

Despite 23 years of steam-dousing, the galvanized Fenestra* Steel Windows in this "cooking" room have never rusted.

Now Fenestra offers you *Super Hot-Dip Galvanized Steel Windows that cost no more than regular steel windows with two inside-outside field coats of paint!* And these windows *never need painting.* That's a saving of over \$3,600 in paint and painting labor—every few years—for the life of your building . . . if yours is an average-sized plant.

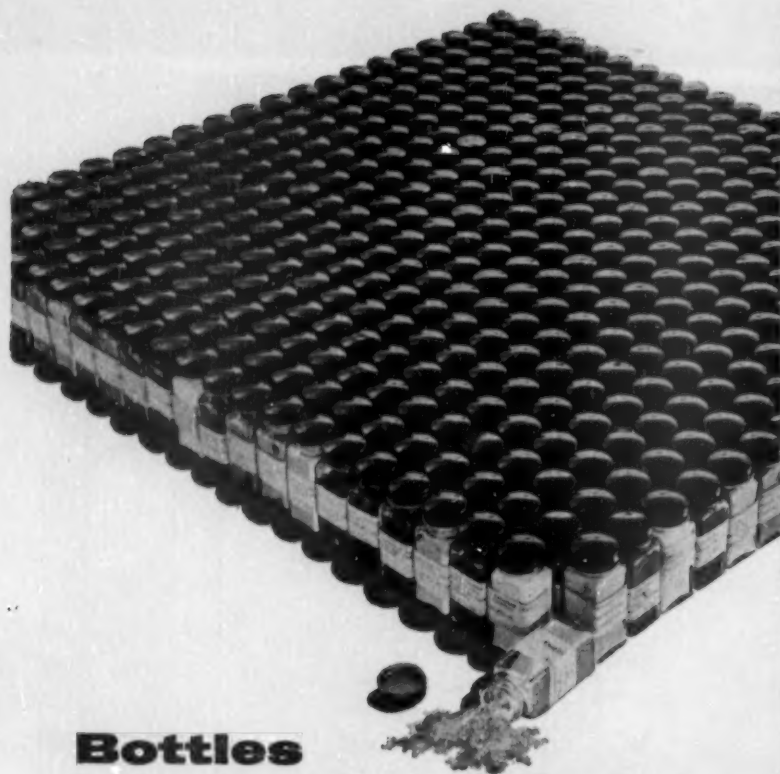
Fenestra has the only plant and equipment in America especially designed for the tricky job of window galvanizing. For details on Fenestra Super Hot-Dip Galvanized Steel Windows, call your Fenestra Representative listed in the phone book yellow pages—or write Detroit Steel Products Company, Dept. BW-3, 3425 Griffin St., Detroit 11, Michigan.



BEND TEST shows why Fenestra Steel Windows are called Super Hot-Dip Galvanized. When two pieces of galvanized steel are bent, then straightened, some types of galvanizing crack open, leaving the steel vulnerable. The Fenestra piece stays protected.

* Your desire for windows of strong material that would resist rust, resulted in Fenestra Super Hot-Dip Galvanized Steel Windows—a great advancement.

Fenestra | **SUPER HOT-DIP GALVANIZED STEEL WINDOWS**



Bottles of Experience!

These bottles, over 600 in the last 3 years, contain samples of dust from the stacks of hundreds of processing plants, oil refineries, steel mills, power plants, chemical plants, etc.

Each bottle contains a different type of dust . . . presents a different dust collection problem. That's why Buell engineers always analyze the dust, then make a detailed study of the operating conditions. This has built an unmatched background of knowledge and experience. A background that enables Buell to resolve problems more quickly, more economically, more efficiently.

From knowledge gained the hard way, Buell has developed three different systems for industrial dust collection. Be sure to have the latest facts before you buy! They are clearly explained in our latest complimentary brochure—*The Collection and Recovery of Industrial Dusts*. Get your copy today! Write Buell Engineering Co., Dpt. 30-C, 70 Pine Street, New York 5, New York.

buell



20 Years of Engineered Efficiency in
DUST COLLECTION SYSTEMS

cutting not only production but also investments in new plant and equipment. His one fear is that a letup in consumer buying might set off a downward spiral of major proportions.

His buoyant optimism, however, makes him sure that a downward spiral is extremely unlikely. If consumers do not get panicky, he says, there is nothing to worry about. In fact, he is confident that a sharp upturn is not only possible but almost certain. He can cite an array of facts and figures to back up confidence.

I. Economic Forces

In his analysis of our economy, Johnson stresses the number of "hidden pressures" that are powerful forces for expansion.

For example, he does not go along with the theory that the scheduled drop in family formation, due to the low birth rate of the 1930s, will be reflected in a decline of consumer purchases. He admits that family formation will decline, but he sees offsetting forces.

For one thing, Johnson points to the pressure for higher living standards created by the big increase in the number of educated adults. In the last decade, the number of high school graduates has increased 80%.

For another, he stresses the pressure of the boom crop of postwar babies, now in the 5-to-9 age group. These children have "reached the age of mobility," requiring more room at home, new schools, and a variety of new household goods.

• **Discretionary Spending**—Johnson believes that these pressures alone will more than offset the decline in family formation. But even more important in the Johnsonian scheme of things is the pressure derived from the "discretionary spending power" of our consumers.

As Johnson defines it, discretionary spending power is the amount of personal income "over and above what would be needed to supply the 1940 per capita level of such necessities as food, clothing, and shelter."

• **Measuring Sticks**—The standard way of measuring consumer purchasing power is to look at the amount of disposable income available. Johnson, though, prefers to measure discretionary spending. He believes his own yardstick reflects "the truly dynamic force of millions of families moving upwards in income groups and facing opportunities for substantial revision in their standard of living."

Discretionary income and disposable income differ chiefly in Johnson's use of 1940 as a base for judging the standard of living. But that base makes a lot of difference.

This disposable income in 1940 was



improved

**Underwood Sundstrand
Adding-Figuring Machine
makes figure-facts**

roll



with **New**
Multi-Flex
Control

- faster
- easier to operate
- quieter
- simpler to multiply

No matter what kind of figure work you do, you'll get *faster* results . . . with *less* effort . . . by using the superbly quiet new Underwood Sundstrand Adding-Figuring Machine.

New, advanced design, plus the famous Underwood Sundstrand 10-key Touch Method Keyboard, brings you these important advantages:

- ∴ greater cycle speed . . . approximately 20% faster
- ∴ new Multi-Flex Bar, for all calculations
- ∴ multiplication made easier and faster
- ∴ easier correction of errors with new electric correction key

You'll be amazed at the time and money savings you get from this machine. You'll be delighted

with its speedy, accurate and QUIET performance. And how your operators will love its smooth, cushioned untiring action!

Ask your Underwood Representative . . . listed in the Yellow Pages of the Directory . . . for a demonstration . . . and begin to roll with 4-point control.



Underwood Corporation

Adding Machines . . . Accounting Machines . . .
Typewriters . . . Carbon Paper . . . Ribbons

One Park Avenue, New York 16, N. Y.

Underwood Limited, Toronto 1, Canada

Sales and Service Everywhere





This tough, strong, cold drawn, 69-inch length of . . .

Pittsburgh Seamless Steel Tube Is The Giant Kingpin of Budd's Revolutionary Disc Brake

Stopping 70 to 80 tons of fast moving railroad car safely, quickly and efficiently without pitching passengers out of their seats has long been a goal of railroads and car builders alike. Budd Company, after years of research, came up with the answer in the revolutionary Budd Disc Brake. It is built around a 69-inch length of the finest grade Pittsburgh Seamless Steel Tubing which acts as the giant

"kingpin" in absorbing all the stress and strain of the braking reaction.

Here's how it works! Old style brakes had shoes which were applied directly to the wheels' surface. The new Budd Disc Brake has a large, cast iron disc mounted on the inboard side of each wheel. Controlled friction is applied to both sides of these discs by two sets of air operated brake shoes.

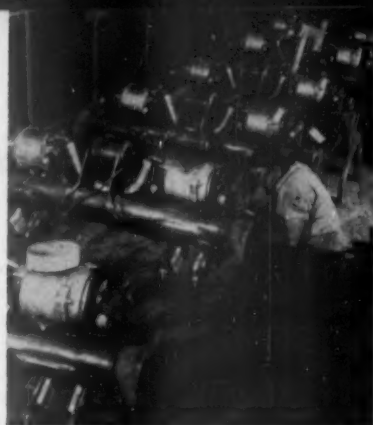
Here's the difference! When old

style brakes were applied suddenly, passengers were jolted—and damaging heat generated in the wheels. With the Budd brake, wheels do only the jobs they were originally designed to do—support and guide the car along the rails. They do not have to act as brake drums.

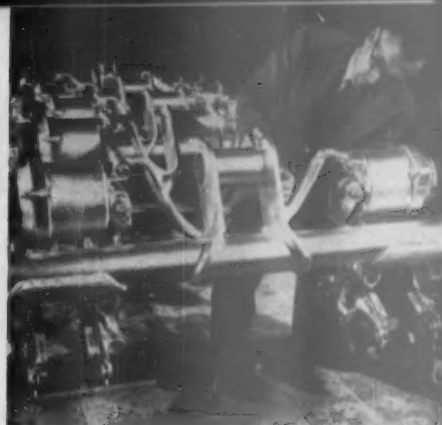
Instead the brake drum function has been transferred to the air cooled disc, precisely engineered to do that



Uniform physicals make possible operations like expanding, welding, and stress relieving of welds at Budd's Red Lion plant near Philadelphia.



The most modern type air cylinders, brake shoes, and other vital parts of the disc brake assembly are installed in this production line . . .



A rigid, final inspection is given the completed brake assembly now aluminum painted and ready for installation on train trucks . . .

important job alone. Stopping is so smooth and chatter-free even under emergency application that passengers are barely aware that the brakes are being applied.

The results are as follows! Because passenger comfort has been increased and maintenance costs reduced, old style brakes are rapidly being replaced by The Budd Company's Disc Brake on America's fastest, most modern trains. Disc brakes are easier to service, cost an average of \$1,000 less per car, per year to maintain. They save nearly a ton of dead weight per car, have half as many pins and bushings to service as brakes using the wheel as the brake drum. Brake shoe life is increased 10 to 20 times!

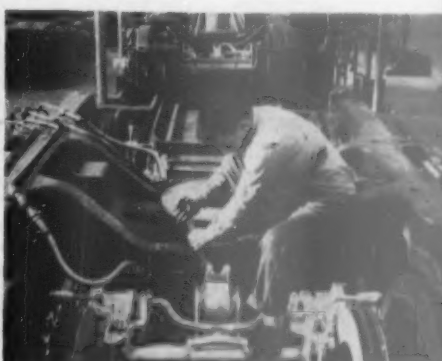
Above all, the Budd Disc Brake is safe. It is standard equipment on Budd's new self-powered, economical Rail Diesel Car (RDC) which is reviving railroad travel in metropolitan areas by greatly reducing operating and maintenance costs.

Inherent quality helps make this possible! Passenger safety and comfort and increased braking efficiency, possible with the new Budd brake, stems from brilliant design en-

gineering and high quality of component parts. For example, Pittsburgh Cold Drawn Seamless Steel Tubing was selected for its high strength-for-weight ratio, for weldability, for close tolerance and smooth surface finish. It provides the giant "kingpin" which has an ultimate strength of 77,000 pounds per square inch—more than enough to absorb the tremendous torsion and bending stresses of the braking reaction.

All of the load of the braking reaction is carried through the "kingpin" seamless steel brake frame tube to the hanger on the railway car truck, and to the outside bearing arms. This application of Pittsburgh Cold Drawn Seamless Tubing is typical of its many vital uses in the aviation, automotive, machine tool, agricultural implement and other industries.

Pittsburgh Seamless Cold Drawn Tubing might be the "kingpin" in reducing costs and improving the products you manufacture. Why not consult a Pittsburgh Steel representative? He may have a suggestion that can save both you and your customers time and money. Write for complete information regarding Pittsburgh Seamless Cold Drawn Tubing.



Four bolts attach the assembly to the hanger box, which is welded to truck . . .



Now installed and ready to roll on one of Budd's self-powered Rail Diesel Cars (RDC), the Budd Disc Brake greatly reduces maintenance costs while improving braking and providing greater passenger comfort.

"Everything New But The Name"

Pittsburgh Steel Company

Grant Building • Pittsburgh 30, Pa.

DISTRICT SALES OFFICES: Atlanta • Chicago • Cleveland • Columbus • Dallas • Dayton • Detroit
Houston • Los Angeles • New York • Philadelphia • Pittsburgh • San Francisco • Tulsa • Warren, Ohio.

PLANTS: Monessen, Pa. • Allenport, Pa. • Akron • Los Angeles • Unionville, Conn. • Warren, Ohio • Worcester, Mass.



Rockwell Report



by W. F. ROCKWELL, JR.

President

Rockwell Manufacturing Company

HOW MANY PEOPLE, do you imagine, really appreciate the brand of courage displayed by a manufacturer each time he puts a new product or a new model on the market?

Research, design, development, field-testing—and tooling for mass production—can absorb hundreds of thousands of dollars before the first unit comes hopefully off the line. And all without real assurance of getting the money back, in spite of the most careful advance market study. Until orders actually come flooding in, the big element of risk remains.

Without the American businessman's willingness to take such risks (in the face of pretty discouraging tax obstacles) our standard of living certainly would never have reached anything approaching its present level. It is only through speculative mass production and mass distribution that Americans are able to buy with their day's work more comfort and convenience than any other people in the world.

* * *

Recently we announced a nation-wide contest for people employed in the gas industry, on the subject of planned programs for the retirement of obsolete gas meters. The purpose of the contest is to highlight the fact that it costs more to keep an obsolete meter on the job than it does to replace it with a more efficient modern one. The best gas meters built 20 years ago were good, but not nearly as good as the best meters built today. Two decades of design and manufacturing improvement have made a lot of difference.

* * *

The effectiveness of any company's public relations efforts depends not only on the skill of its public relations men, but on the depth to which they are able to probe for newsworthy material. With that fact in mind, we prepared for our office and plant personnel a short, interesting booklet which explains how good public relations promotes the welfare of all Rockwell people, and how each of us can help as a reporter. The result has been a considerable increase in the flow of useable material, and in the very desirable sense of participation.

* * *

Several years ago we introduced, under the trade name "DELTA," an innovation in machine tools: our Air-hydraulic Drill Unit. This is a self-contained, air-powered and hydraulically-controlled packaged power unit for single-purpose high speed machining at low cost. It was the first time that automatically controlled machining precision had been offered as a package, capable of almost limitless applications in the current trend toward Automation. Sales have grown to such an extent that it has been practical to set up a separate Drill Unit Division, and this product is now marketed as the "Rockwell Air-hydraulic Drill Unit."

* * *

Completion of additional gas regulator manufacturing capacity at Norwalk, Ohio, makes a total of 397,000 square feet of manufacturing capacity added to our existing plant facilities during the past year. The other additions included the new Rockwell-Nordstrom lubricated plug valve plant at Sulphur Springs, Texas; our new water meter plant at Uniontown, Pa.; substantial additions to our DuBois, Pa., gas meter plant; the leasing of a manufacturing plant adjacent to our Pittsburgh headquarters; and the purchase of our first Canadian subsidiary, Callander Foundry and Manufacturing Company, Ltd., of Guelph, Ontario, Canada's leading producer of power tools.

One of a series of informal reports on the operations and growth of the
ROCKWELL MANUFACTURING COMPANY
PITTSBURGH 8, PA.

for its customers, suppliers, employees, stockholders, and other friends



\$75.7-billion after taxes, as against \$248-billion in 1953. This represents an increase of 3.3 times.

Using the same figures, Johnson calculates that \$49.2-billion of the \$75.7-billion total in 1940 went for basic living costs. This left \$26.5-billion for all other items—or what Johnson terms discretionary spending. In 1953, the amount of income needed for the same basic living costs required \$112-billion, primarily because of inflation. But with consumers jingling \$248-billion in their pockets, they had \$126-billion left over for discretionary spending—5.1 times as much.

• **Adman's Gimmick**—Many economists dismiss the notion of discretionary spending as meaningless. Says one academic authority: "It's nonsense to argue about how much the consumer has to spend over the 1940 level. We all know that many of the things he buys today are necessities, not luxuries. Therefore, there's no more discretionary income available, only more disposable income. Discretionary income sounds good, but it is just an advertising man's gimmick."

• **Grits to Artichokes**—Gimmick or no, Johnson is not perturbed by this type of criticism. He thinks the advance from a "corn grits economy" to what he calls a "steak and artichoke economy" bears out his argument that consumers want higher living standards and will resist an early depression. What's more, he believes they have the money to get just what they want. At no time in history, Johnson declares, have consumers been so well-heeled as they are now.

This does not mean that he advocates a spending spree in which consumers use up all their liquid assets. Rather, he urges a wider use of credit. In taking this view, he parts company with many who feel that short-term consumer debt, at \$28-billion (BW—Mar. 6'53,p43), is already too high. But Johnson stresses that consumer debt is now only about 22% of consumer income, while in 1940 it was 31%. He feels we could safely increase the debt at least 70%.

"There are a few people in the lower income bracket who are overextended," he says, "but most people can safely add to their debt. Without dipping into their savings, they could touch off another long period of sustained prosperity."

• **Painless Prosperity**—Johnson argues persuasively that we can have prosperity even if government spending drops. He cites recent history as proof that no pump-priming is necessary.

From 1944 to 1947, he points out, defense expenditures were cut back the equivalent of \$128-billion at present prices, without any decline in economic activity. He figures that a mere 5%



CORNING GLASS BULLETIN

FOR PEOPLE WHO MAKE THINGS

3-WAY glass grounds electricity, conducts it, and fights off heat rays . . . Glass gun shoots oil . . . An introduction to solving some materials problems.

3-way glass

E-C glass is a PYREX brand glass panel (or tube) permanently bonded on one side with a thin (20-millionths inch) transparent coating that conducts electricity. (The E-C stands for Electrically Conducting.) Run a current through it and you get an efficient heating element. Ground it and it drains off charges of static electricity, as any metal would. (But you can see through the E-C glass.) Let it stand by itself, with or without electrical or ground connections, and E-C glass reflects infrared heat rays.



E-C radiant glass panels drying lacquer on plastic sheets.

Since 1950 we've worked with a number of customers on applying E-C glass, quite successfully, as a heating element in space heaters, home appliances and industrial drying equipment. (It's especially useful where an uniformly distributed heat flow is wanted.)

One of the most recent applications is shielding certain elements of IBM's new electronic calculator from static that might disrupt the workings of this remarkable abacus.

And a well-known steel producer has erected a curtain of E-C glass between shear pulpit operators and the intense heat of the fiery steel bars moving through the shear. (About 60% of those sizzling infrared rays bounce off the E-C curtain.)

Not every day, but every now and then, some manufacturer, bent on new product development or old product improvement, shoots a question at us, "What about this E-C glass of yours?"

▼ We're always glad to tell people what we know that's pertinent to their problems. And we'll be glad to tell you, too, if you're interested. Just check the E-C square in the coupon below.

glass gun

Nobody would have believed five years ago that a gun made of glass could shoot anything, but today the oil industry is using glass guns to shoot holes in heavy steel oil well casings to release trapped oil pools miles deep in the ground, making run-out wells produce profitably again and even bringing some dry holes to life.

These guns are called glass jet perforators. They contain shaped explosive charges and a 4-inch charge will cut a neat hole through six inches of steel without leaving even a burr.

McCullough Tool Company of Houston, Texas, was far from happy with the containers for their shaped explosive charges. After considerable experimenting with various metal containers, McCullough asked, could we design and manufacture a glass container that would stand the tremendous pressures involved, but completely disintegrate after the charge exploded? (Metal containers left debris in the well which often clogged valves and pumps.)



Up to thirty or forty glass jet perforators are mounted in series on a metal strip for lowering into oil well casing.

How we found the answer in PYREX heat-resisting glass perforators may interest you even if you don't own an oil well. It illustrates another instance where we were able to help a customer find a successful answer to a design and engineering materials problem.

▼ An article in the October-November 1953 Corning GLASSMAKER tells the story in detail. Just check the appropriate square on the coupon below and we'll be glad to send you a copy.

solving problems

If you've been wrestling with a materials problem that still refuses to lie down long enough for the count, we encourage you to thumb a few informative pages that describe briefly and succinctly some of the things other people are doing today with glass.

In a matter of only a few decades glass has changed from a simple, fragile material of limited utility into a versatile material whose uses are unnumbered. You'll glimpse something of the meaning of this conversion by remembering that glass can now be made as light as cork or heavier than iron, hard as steel or soft as cotton, thin as tissue or thick as a wall; that it can be fragile or strong, a conductor of electricity or an insulator, a selective transmitter or absorber of radiation in the infrared or the visible, the ultraviolet or the X-ray regions of the spectrum, as required.



There may be an idea or two for you in these 48 pages of informative but non-technical reading about some of the things people are doing these days with glass.

▼ This parade of antithetical utilities roughly indicates the flexibility and versatility of modern glass. If any of them suggest a possible answer to that stubborn problem of yours and you'd like to modernize your information about glass, quite painlessly, the few pages we mentioned three paragraphs ago make up an illustrated booklet we'd like to send you. Just make your mark in the "Glass and You" square and mail the coupon to us.

If the items covered on this page don't seem to bear on any problem of yours, we may have the information you need at our fingertips. We'd like to hear from you.

CORNING GLASS WORKS
CORNING, N. Y.

Corning means research in Glass

CORNING GLASS WORKS, 20-3 Crystal Street, Corning, N. Y.

Please send me more information about E-C glass ☐; a copy of the Oct.-Nov. '53 GLASSMAKER article ☐; "Glass and You" ☐.

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____



**Wolverine Copper
Water Tube**

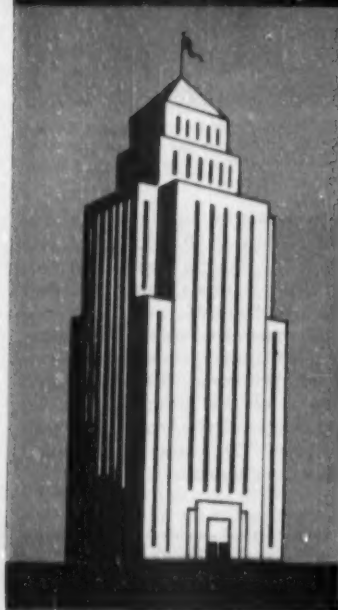


**Wolverine
S. P. S. Pipe**



**Wolverine
Electric-welded
Steel Tube
for Wet Heat**

Tubemanship AND CONSTRUCTION



Building a hospital? A housing project? An office building?

If so, the proper selection of materials—particularly tubing—is your top job. When you consult the Master Plumber who installs tubing, he'll more than likely recommend Wolverine. After all, he has had first-hand knowledge of Wolverine Tube's ability to stand up in tough spots.

And the reason is Tubemanship—the one-word picture of Wolverine's quality-control story.

Yes, if you talk to Master Plumbers and the wholesalers they deal with, they'll tell you to buy Wolverine—to be sure. WOLVERINE TUBE DIVISION of Calumet & Hecla, Inc., 1501 Central Ave., Detroit, Mich.—Plants in Detroit, Michigan and Decatur, Ala.



WOLVERINE TUBE DIVISION
OF CALUMET & HECLA, INC.

Manufacturers of Quality-Controlled Tubing

PRODUCERS OF TUBING AND TUBULAR PRODUCTS OF COPPER, COPPER-BASE ALLOY,
ALUMINUM AND WELDED STEEL.

increase in personal consumption is enough to offset a \$10-billion cut in government spending. Any greater increase, he says, would provide a sizable budget surplus.

II. Natural Optimist

Just as he refuses to be ruffled by critics who attack his discretionary spending formula, Johnson has no harsh words for those who think that his job as an advertising economist is responsible for his rosy outlook. Optimism and advertising go hand in hand, though, and as a natural optimist, Johnson is a natural for his job.

• **Working His Way Up**—Most of his working years have been spent as an advertising economist for the nation's No. 1 agency, J. Walter Thompson Co.

Johnson, who is proud of his Norwegian-American parentage, was born in Jacksonville, Fla. Whether or not his sunny birthplace had anything to do with it, the fact is he has been smiling since. He was trained at Michigan State as a mechanical engineer, then attended Harvard's Graduate School of Business. For two years after he received his degree, he served as a researcher for the Harvard Bureau of Business Research.

In 1926 he joined J. Walter Thompson as a market analyst, went up the ladder to director of research in 1942, to a vice-presidency in 1946. He has a reputation as a leading expert on how the consumer behaves. And the titles of his books leave no doubt that he is always looking on the sunny side of the economy: *The New Outlook in Business*, *Primer for Postwar Prosperity*, *Market Potentials*.

• **Optimist's Key**—As a natural optimist, Johnson has made himself part economist, part market researcher, and, as his cross-country tour testifies, part salesman. Selling, he believes, is the key to sustained prosperity.

You would expect this point of view from an ad agency economist. But Johnson makes clear that he doesn't think advertising is all there is to selling. He holds that the biggest obstacle to a real outburst of new production and consumption is the lack of good salesmen who are able and eager to exploit the potential market reached by advertising.

• **Dearth of Salesmen**—The lack of salesmen is Johnson's major concern.

"Most of our key executives today—those 50 to 60 years old—were junior executives at the start of the long depression," he observes. "For the next 11 years of their most impressionable business experience they struggled through depression, mature economy, retrenchment, and defeatism. Inevitably, many of them must look upon this condition as the 'normal' to which



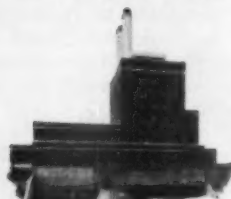
Central Hudson Gas & Electric Corp. — DANSKAMMER



Cincinnati Gas & Electric Co. — BECKJORD



Dayton Power & Light Co. — O. H. HUTCHINGS



Duke Power Co. — LEE



Metropolitan Edison Co. — TITUS



Niagara Mohawk Power Corp. — DUNKIRK



Public Service Electric & Gas Co. — SEWAREN



Rochester Gas & Electric Corp. — RUSSELL



T.V.A. — JOHNSONVILLE



Wisconsin Electric Power Co. — PORT WASHINGTON

10 OF THE TOP 15

The ten power stations shown on this page are in a very real sense *symbols of power progress*. And power progress is perhaps the most important single fact in the economy of this country today. It is the reason why we have far more low-cost electricity to turn the wheels of industry and provide modern comforts for our homes than any other nation in the world.

The common measure of power progress is efficiency . . . expressed in terms of fuel consumption per kilowatt-hour. A Federal Power Commission report issued in December, 1953, covering the operation of 331 power stations during 1952, discloses that the ten plants shown here rank among the fifteen most efficient steam-electric stations in the country.

All of the steam generating equipment in these ten stations was designed and built by Combustion Engineering, Inc.

B-724

COMBUSTION ENGINEERING, Inc.

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we must be prepared to return after the 'abnormal' period of production for war or defense. They may be reluctant to grasp the opportunities inherent in our present dynamic selling economy."

• **Need Imagination**—Although usually affable, Johnson is quite upset by the "market saturation" school of thought. He feels that the auto industry, for instance, hasn't yet recognized the vast extent of its potential market.

"Car dealers have no imagination," he says, "mainly because they haven't had to. But they'll have only themselves to blame if they don't learn to sell."

He singles out as a neglected field the 10-million families that have two or more qualified drivers but only one car. "The housewife left at home when her husband takes the car to work is immobilized," he declares, "and the trend to the suburbs has accentuated her need for a car of her own. Moreover, she can afford it."

Johnson estimates that intelligent and aggressive selling should be able to convert at least 10% of the 10-million prospects to customers every year. This would also expand business in gasoline, oil, and maintenance and would increase pressure for road improvements.

• **Ways to Sell**—Aggressive selling, Johnson is at pains to point out, is not the same thing as the "hard sell." He is very insistent on this point. In his mild way, he is sharply critical of most forms of huckstering, including the blatant sales approach of bullying and browbeating customers into buying.

"That kind of hard selling won't change anything," he says, and adds: "Yelling about cars or showing pretty pictures won't sell the 10-million potential customers on the need for another car."

The art of selling, according to Johnson, lies in the ability to create a need. All that's necessary to sell an extra million cars, he says, is an intelligent approach designed to show customers "why they need another car and how handicapped they'll be without it." Advertising can help persuade customers, he says, but a personal tie-in is the only real way to sell them.

• **Selling the Salesmen**—If enough good salesmen are available, Johnson is willing to bet that his prediction of a sharp upturn this year will come true. He feels sure that the slow downward drift we have experienced to date is only "temporary" and will be reversed "as soon as the consumer is convinced that there is no trouble ahead." He believes it is up to the salesmen to do the convincing.

As for Johnson, he thinks it's his job to convince salesmen to convince the customer. In his book, optimism will mean good business.

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set Your watch, too
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For this modern mill is one of the largest and longest-experienced makers of this product . . . and *no one makes it better*.

Bristol *Clock Brass* comes to you "on the button" . . . in large coils, without welds . . . with width and gage tolerances consistently uniform. And all gears and parts blanked from it are remarkably free from burrs.

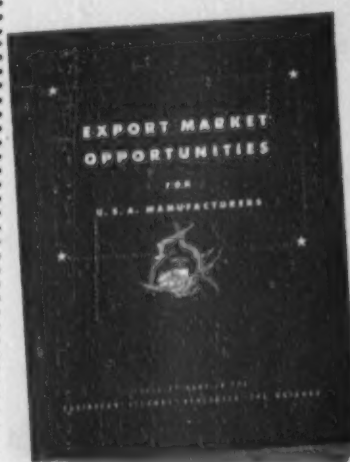
Ask any manufacturer (and there are scores of them) who fabricates parts from Bristol *Clock Brass* . . . he'll tell you what we mean by "Bristol-Fashion."

THE BRISTOL BRASS CORPORATION has been making Brass strip, rod and wire here in Bristol, Connecticut since 1850, and has offices and warehouses in Boston, Chicago, Cleveland, Dayton, Detroit, Milwaukee, New York, Philadelphia, Pittsburgh, Providence, Rochester. The Bristol Brass Corporation of California, 1217 East 6th St., Los Angeles 21.

"Bristol-Fashion" means **Brass at its Best**

To Sales Executives

who don't see how domestic sales can keep plants in full production this year



This free book tells about a big "overseas" market right next door to you. Did you know that the Caribbean area—famous for cruises—is also a BIG market for your goods? Imports of the nearby Caribbean are well over a billion and a half dollars a year! And growing fast! Goods of every conceivable kind; mostly from the United States.

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COMPANIES

A New Personality for Rice

● Converted Rice, Inc., is getting it by milling and selling its product as a specialty food.

● It's winning customers, helping revamp an industry.

You see some long faces in the rice industry these days. There's talk in some places that the postwar buggy ride is about over, that the zooming export market—up over 300% since 1940—is due to go on the skids.

Add to this the fact that Converted Rice, Inc., of Houston, Tex., is a comparative newcomer in the ranks of rice mills—that it sells a high-price product—and you might think its officers would be deep in a gloom wave. But you'd be wrong. Gordon Harwell, Converted's 57-year-old president, has just announced that the company is spending \$750,000 to \$1-million this year on new production facilities to boost output 35% to 40% by fall. The company's January sales were 25% above a year ago.

What keeps Converted smiling is this: It's not selling a commodity but a specialty food, geared mainly to the domestic market. Harwell and Converted are two big reasons why it's as hard to find a 100-lb. sack of rice in a retail store today as it was to find a package of rice 20 years ago.

Converted's rapid rise has been based on Harwell's theory that the only way to make money consistently on rice is to take it out of the commodity category. What Converted sells is a packaged brand-name product with uniform quality and a high vitamin content (it's the conversion process for sealing in the natural vitamins that gives Converted its name—and its particular status as a specialty).

• **Cash in the Till**—So far the theory has paid handsome dividends. Last year Converted did close to \$15-million worth of business. Right now, the mill is working round-the-clock. Harwell figures that the company's Uncle Ben's Converted Rice now has some 18% of the domestic long-grain packaged rice business—and will push past the 20% mark when the new facilities get rolling.

All this is sweet music for a company that has only been in the domestic rice business in a sizable way since 1947 and has had to buck stiff competition to fight its way to its present place as one of the country's biggest long-grain mills.

• **Industry Chorus**—The tune that Con-

verted has been playing on its way up hasn't been a solo, either—the rest of the industry has been chiming in on the chorus. The move to convert rice from a commodity to a specialty food has upset long-standing customs and the industry has literally had a revolution. Converted was a leader in these changes:

• It weaned rice growers from short-grain to long-grain rice; this has meant better prices for the growers, an easier-to-cook and better-tasting product.

• It helped change the production end from a seasonal to a year-round operation; Converted is running 11½ months a year, 24 hours a day, seven days a week.

• It was out in front in promoting, advertising, and merchandising rice on a national scale; this year, the industry as a whole will spend some \$10-million on promotion.

• Its campaign has helped to keep per capita consumption of rice in the U.S. up to a steady level while other grain products such as wheat flour and cornmeal, and starchy foods such as potatoes, have fallen off.

All this besides the basic shift to brand-name packaging, in line with the general trend in food merchandising.

I. Steps to a Goal

Harwell was a pioneer in rice packaging long before he launched Converted on its company career. It was his first step in taking rice out of the commodity category. But he had to add some product engineering and modern promotion methods before Converted could reach its present place as a specialty food seller.

• **How It Began**—When Harwell first took a gander at the rice business back in 1934, rice was strictly sold and merchandised as a commodity. If you wanted a pound or two of it, the grocer likely as not would dig it out of a 100-lb. sack over in the corner. Most rice was milled and sold locally, and quality depended on local combinations of rainfall, climate, soil conditions.

One trouble was the nature of short-grain rice, then the major part of the

All new engineering inside

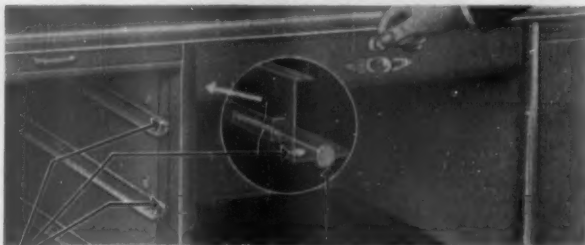


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QUALITY

Here's an X-ray look into the **easiest** operating desk you can buy

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New
ease of
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1. New Nylon Stationary Bearings—glide drawers quietly in and out with effortless ease.

2. New Effortless Locking—new spring and locking mechanism give easy and positive locking and unlocking.



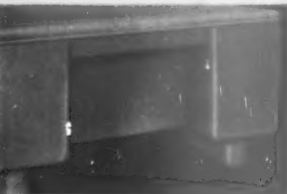
3. New Sliding Reference Shelf is reversible, can be used as utility drawer. Glass insert or pin tray is available.



4. New Drawer Stop, spring controlled, positive action—drawer removal simplified.



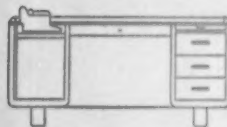
5. New Roomier Utility Tray for more convenient storage. All compartments full height of drawer—no spillage.



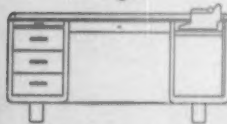
6. Choose either Recessed or Flush Back on original equipment. Can be easily changed from one to the other at any time.

New Flexibility

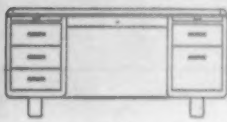
Same desk adapts for different uses



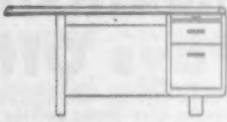
Reverse pedestal to get:



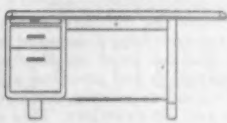
Replace typewriter pedestal with drawer pedestal to get:



Replace pedestal with end panel to get:



Reverse pedestal and end panel to get:



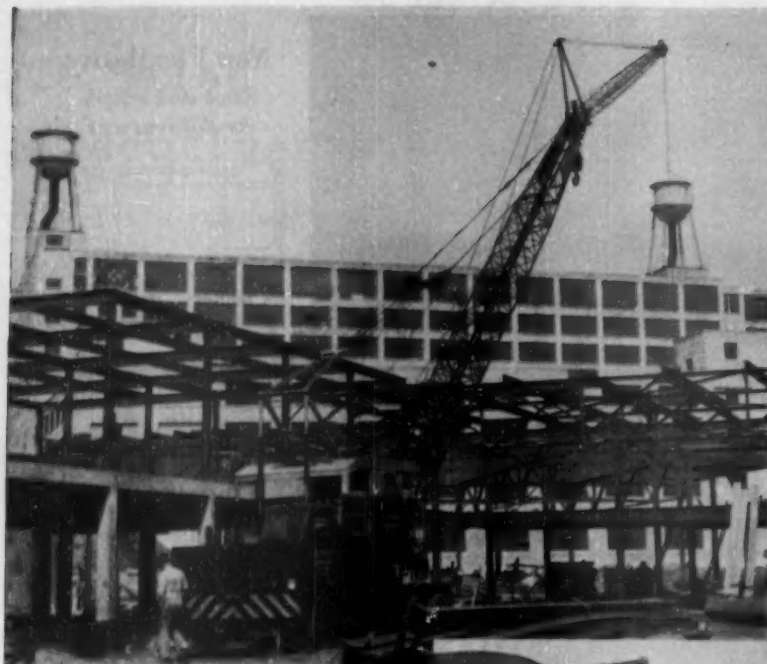
You can meet many changing needs through rearrangement of original parts. By stocking a few spare parts you can quickly and easily change this new desk to almost any model.

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American machines, such as the 375 Truck Crane, are an important factor in Kenwood's progress. The American is the company's only full 25-ton capacity truck crane that can be used over public highways without special permits. This means faster shifting from job to job, as well as more power and flexibility on the job!

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crop. Growers liked it because it matures quickly, and has a good per acre yield. But in cooking the grains tend to gum up and stick together.

When Harwell walked into the picture, he was a partner in the Houston brokerage firm of James & Harwell. Mulling things over, he figured that what the rice business needed was better ways of merchandising the product.

The first thing he hit on was packaging. He bought some secondhand packaging equipment, started buying rice from local mills and selling it under the brand name Uncle Ben's Rice—still as part of the brokerage business. In two years Uncle Ben's was among the leaders in packaged rice.

Harwell soon discovered that it would take more than just packaging and a brand name to do the trick. Food experts complained that quality varied too much. And in a caloric and vitamin-conscious age, milling processes washed away most of the water-soluble B-complex vitamins in the husk and the inner and outer bran layers, leaving little but starch.

• **Second Step**—Harwell bought a pressure cooker and went to work in his kitchen to try to find a way to process rice to make it uniform in quality, appearance and taste. He got nowhere, but he kept on the lookout. In 1941 his eye hit on a piece in a technical paper—and in no time the wires between the U. S. and England were buzzing.

What he had seen was an article on a new rice conversion process invented in England by E. G. Huzenlaub. It kept 80% of the vitamin content intact, and turned out rice uniform in appearance and taste, with nongumming grains.

Basically, the process comes down to this. You steep or soak rough rice in hot water under pressure; this forces the B-complex vitamins to the center of the kernel. Then you give the soaked rice a Turkish bath with live steam; this gelatinizes or hardens the starch, seals in the vitamins. You dry the rice and mill it as usual.

For Harwell, that was it. But he was just a small operator way off in Texas. Huzenlaub was after the big millers. When he found they liked what they already had, though, he was willing to listen to Harwell. Before Huzenlaub went back to England, Harwell had a lease on the patents in his pocket. (In 1952 Converted bought the world rights to the Huzenlaub process.)

• **Producing**—Harwell was set to go. But now it was wartime; to build a plant, you needed priorities. That's where another feature of converted rice came in: It was weevil resistant. Harwell wangled a small order from the Army Quartermaster Dept. for a few hundred pounds of rice, then got his

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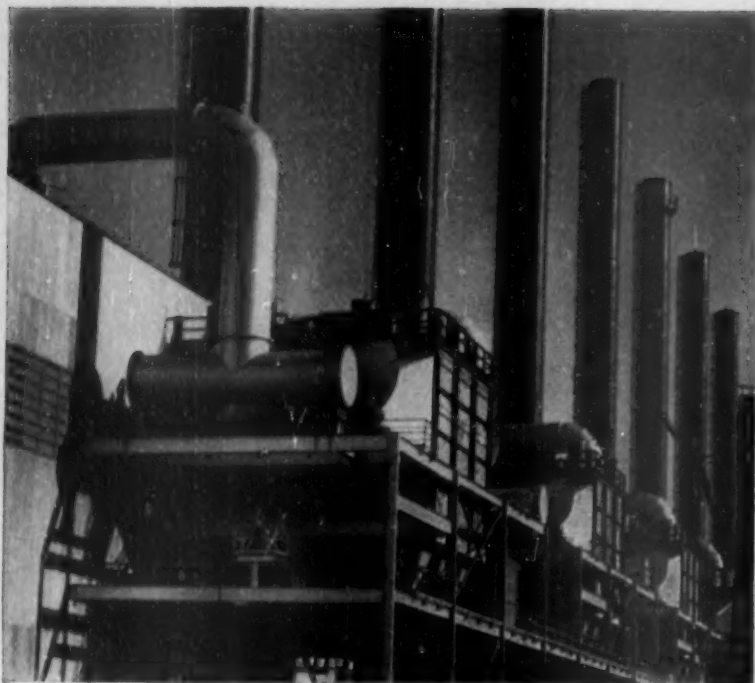
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priorities, bought secondhand equipment, and was on his way. Converted Rice shipped its first carload to the Army on Oct. 29, 1942.

The Army's problems with weevil infestation in the Pacific and elsewhere gave Converted a break. By 1945, it was turning out 65-million lb. of rice a year for the services.

• **Selling**—The next year, with Army orders tapering off, Harwell could see the handwriting on the wall. He had to make a quick decision—to slow down production and lay off workers while building up national distribution and sales, or to maintain production and make a fast play for new markets.

Harwell had a powwow with his partner, Forrest Mars (the candy man, now chairman of the board of Converted Rice, Inc.). They decided to go all out.

II. The Big Push

In 1947, Converted hit New York with a swarm of publicity, advertising, and promotion. Harwell had concluded that as New York goes, so goes the nation—gastronomically if not otherwise.

He began with an all-rite dinner at New York's Ritz-Carlton, for food editors, columnists, cooking specialists—timed to match a rash of New York publicity. Then came a national magazine campaign.

It was a big splash. But then there was a lull. Inventories were used up. Dealers didn't reorder. Then housewives began asking for Uncle Ben's Converted Rice. Business picked up—and has been going up ever since.

So has Harwell's promotion campaign. He has gone after consumers, to get them to think of rice as a quality or specialty food and as a three-times-a-day dish. He has gone hard after the restaurants, to convince them that Uncle Ben's cooks so easily and uniformly that even a bus boy could whip up a dish. He has made a big play, too, for the canners.

After Converted hit the civilian market with its big promotion bang it didn't take long for the company to start piling up an impressive sales record. By the 1952-53 fiscal year, sales of Uncle Ben's Converted Rice were double those of the 1946-47 postwar low—25-million lb. against 12.3-million.

What's more, production at the Converted Rice mill in 1952-53 was up about 17% over the previous year, against a drop of about 5% in production of all Southern mills.

This record was racked up despite the premium price Converted charges. Uncle Ben's sells at 3¢ to 4¢ higher than the average milled long-grain rice, and 6¢ to 7¢ higher than short-grain rice.

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VACUUM-MELTING process that turns out superalloy steel is brainchild of National Research Corp. To put it across commercially, National's teaming with Crucible Steel Co.

New Combination in Steel

Technology's unremitting demand for more and cheaper superalloys brought about still another industrial marriage last week. Pittsburgh's Crucible Steel Co. of America, one of the nation's oldest producers of tool and specialty steels, bought half the common stock of Vacuum Metals Corp., a wholly owned subsidiary of National Research Corp. of Boston.

• **At Stake**—"We can achieve purities and consistencies with their vacuum-melting equipment which can't be obtained with conventional steel-melting equipment," said president William H. Colvin, of Crucible. He added that Crucible customers, particularly aircraft manufacturers, have been demanding higher-strength, higher-temperature metals with which to command better performance from existing engines, aircraft, instruments and other high-duty equipment. Crucible expects to be the first steelmaker to be able to supply such vacuum-melted metals commercially.

The move paves the way for National Research to capitalize on 10 years of research into vacuum processes for metals. The linkup fits in with its pattern of affiliations in recent years with major U.S. companies that have helped provide the production facilities, funds, and experience needed to commercialize National's developmental work (BW-Mar.22'52,p133).

• **Terms**—Crucible got its half interest in Vacuum Metals—25,000 shares—in exchange for turning over to National Research 25,000 common shares of

Crucible. The Crucible common closed at \$24.125 the day the exchange was announced. In addition, Crucible is paying Vacuum \$500,000 for 5,000 nonvoting preferred shares, which will provide working capital for the joint venture.

Most of the capital will go toward construction of a wholly new, commercial-size melting furnace at Crucible's Syracuse (N. Y.) works. Its capacity will be three tons daily. It will cost about \$250,000. Vacuum Metals will also continue melting at its Cambridge (Mass.) pilot-size furnace, whose capacity is about 25 tons monthly. The metal will be finished on Crucible facilities. If the added Syracuse capacity comes in on schedule next summer Vacuum Metals' production will soar an estimated 500% within a year. Under the agreement, Crucible will continue to put up most of the capital for production, while National will put up funds in the future for more research.

• **Products**—The joint venture allies Vacuum's patents and know-how in a rather new field of metallurgy with Crucible's extensive metallurgical experience, finishing plant, and marketing organization.

Aircraft engine and airframe makers, electronic tube manufacturers, and certain precision instrument makers are expected to furnish an immediate market for Vacuum's output.

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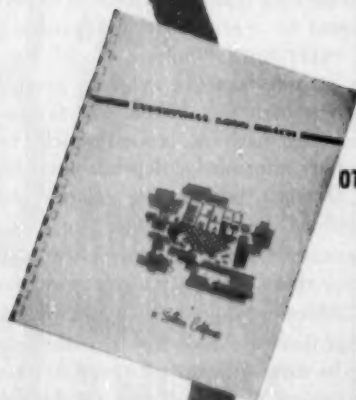
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superior fatigue life. Ball-bearing steels for precision bearings in automatic control instruments have been made and sold successfully by Vacuum for several years. Such steels now cost perhaps 10 times as much as steels of the same kind made in conventional electric-arc furnaces. This price gap, however, may be narrowed by two things:

- Rejects tend to be significantly fewer with the vacuum-melted steels because of their higher purity.

- Production in commercial-heat size vacuum furnaces will tend to narrow the gap in unit costs that exists between large conventional electric furnaces and pilot-size vacuum furnaces.

- **Vacuum Process**—Vacuum's furnace has an induction coil heating a charge of conventional raw materials in a crucible. The operation is remotely controlled inside a tank where air is removed to a very small fraction of an atmosphere. Production ranges from three to 13 heats daily, all of which may be charged and poured without losing the vacuum. The operation refines the raw material, though no conventional metallurgical slag is created. Instead, impurities are volatilized and withdrawn during the process by means of what might be compared to a series of air-locks.

The process is considered promising at least in part because many metallic elements that are important for superior high-temperature, high-strength performance undergo chemical changes when exposed to oxygen and other gases during processing. Refining such metals in the absence of these gases yields a purity that can't be obtained in conventional furnaces.

- **Team-Minded**—Crucible, like National, is no stranger to joint ventures. Several years ago, with Remington Arms Co., Inc., it organized Rem-Cru Titanium, Inc., a producer and fabricator of titanium. The Vacuum Metals move is similar. However, Crucible would have bought Vacuum outright if National hadn't insisted upon the joint ownership setup.

The venture gives National not only a continuing stake in the process it developed but also a substantial interest in a leading producer in the tool, stainless, and specialty steel business. But National disavows any designs for deliberately gaining control of companies, says it's merely out to realize profits from its big investments in all types of research. Gordon Kiddoo, head of National's development department, is the man who decides how this can best be done in view of varying industry patterns. In one case he may decide on a partnership, in a second on taking equity in another company, in another he picks a licensing arrangement.

National's decision to team up with

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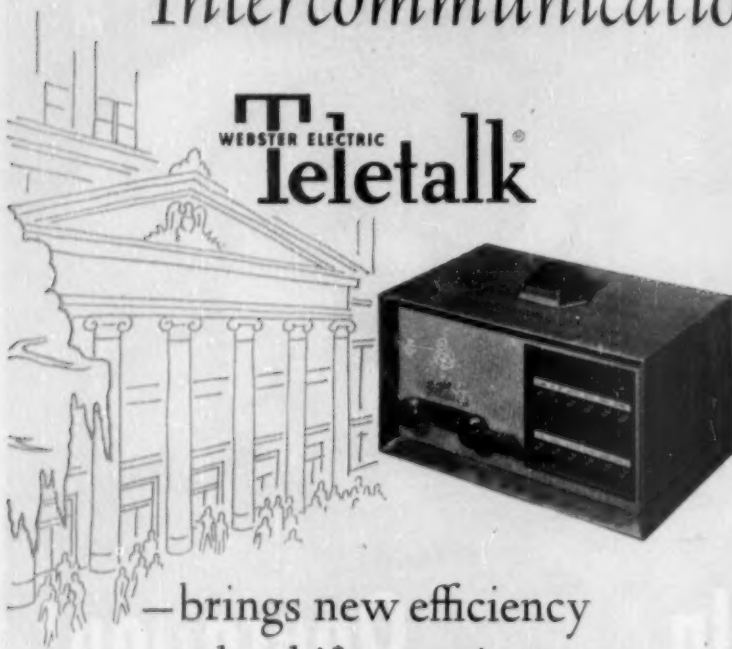
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Crucible hinged on the fact that Vacuum Metals had limited fabricating capacity and it was scouting for another outfit to bear the production brunt. Earlier, National formed a triple partnership with United Gas Corp. and Electric Bond & Share Co. to get hold of raw materials, capital, and services it needed for petrochemical research. It joined with Monsanto Chemical Co. to gain funds and experience needed for titanium research. Just a month ago, together with Walker Topp Associates of Boston, it formed Fiber Research Corp., pooling funds for investigating fiber-grading equipment. The basic idea is that when the research turns up something promising, the partners will form a commercial company such as Vacuum Metals.

In the case of Minute Maid Corp., a frozen orange juice concentrate producer and former subsidiary, National converted its stock equity into royalties. It was also thinking in terms of royalties when it licensed a vacuum process to Minnesota Mining & Mfg. Co.

• **No Limit**—In combination with Crucible, National expects to come up with new metals and processes that Vacuum Metals will turn to commercial profits. It plans to intensify its metallurgical research program, not only in vacuum-melting processes and products but in such fields as vacuum sintering and protective coatings for metals.

COMPANIES BRIEFS

Beer and oil don't mix, Peter Fox Brewing Co. of Chicago has decided. The company plans to split its brewery business from its string of 125 oil wells in Illinois, Indiana, Oklahoma, and Texas. In the fiscal year ended June 30, 1953, the company made \$231,544 on oil and lost \$29,475 on beer.

Jack Cage Industries, Inc., of Dallas bought the A. R. A. Mfg Co. of Fort Worth, a pioneer manufacturer of automobile air conditioners. The newly acquired company will operate as a division of Jack Cage Industries, Inc.

Worthington Corp. (BW—Nov.28'53, p120) bought the L. J. Mueller Furnace Co. of Milwaukee, 97-year-old manufacturer of heating equipment. Assets were paid for with Worthington stock.

Consolidated Engineering Corp. of Pasadena (BW—Nov.15'52,p170) spun off a subsidiary, ElectroData Corp., to carry on the business formerly in Consolidated's computer division. ElectroData's wares include the Model 203 electronic digital computer for industry and science.



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BUSINESS ABROAD

German Cartels Try for a Comeback

● The Allied drive against German trusts is ending after scoring high in physical deconcentration of key industries.

● But it hasn't squelched the cartels and Economics Minister Ludwig Erhard won't be able to get a strong law on the books.

● German businessmen will fight to get a compromise measure with a batch of loopholes.

U.S. officials in Washington and West Germany this week were hammering out a plan to wind up the Allied deconcentration and anticartel programs in West Germany, and turn over the reins to Chancellor Konrad Adenauer's government. By June, Washington thinks the job of splitting up the great prewar coal, steel, and chemical combines will be complete. By fall, at the latest, the Germans will have their own anticartel laws on the books.

It looks as if Washington can call its program for physical deconcentration of the trusts a success. I. G. Farben, for example, will emerge as six separate chemical companies, some of which are already competing with each other. Seven coal trusts are now 20 companies; nine steel combines have become 24 producers. Deconcentration has made for far more competition than these three industries knew prewar and it is likely to stick.

● **Cartel Compromise**—When it comes to decartelization, however, there's no success story to report. Slowly but surely, German industrialists seem to be winning their fight to bring back the cartel as a dominant feature of economic life in West Germany.

If Economics Minister Ludwig Erhard, a firebrand for free enterprise, had had his way, anticartel legislation would be on the books already—a real "verbotsgesetz" or tough law prohibiting cartels. But it's too late for that now. Business opposition to such a law has grown stronger in recent months. And it's being sharpened by the current recession in the German steel industry and by growing unemployment throughout the country.

If legislation is to be passed by fall, which seems to be the government's present target, it will have to be a compromise between Erhard's views and industry's. Such a compromise, no matter how good it looks on paper, is sure to leave considerable room for

German businessmen to make price-fixing and market-sharing deals.

● **Allied Dent**—That doesn't mean the German economy will move right back into the prewar pattern. The Allied occupation has brought some changes that won't be easily reversed.

For one thing, the German economy is relatively free of cartels today thanks to the anticartel law that the Allies imposed early in the occupation. Even compromise legislation won't give German industry the freedom it had before the war to form cartels.

● **Legislation**—Still, Erhard's hope of patterning the German economy after the U.S. competitive system already looks like dream stuff. The best he can hope for is an economy that's less tied down by cartels than any other in Western Europe.

As things look now, Erhard will present a draft law to the Bundestag in June. But it will be quickly shunted into committee, probably not come up for a vote until fall at least. By that time the legislation won't look much like Erhard's original draft, which will call for outlawing cartels in principle, only permitting them in exceptional cases. Every passing month seems to bring new proposals designed to narrow the gap between this kind of legislation and industry's demand for a law that permits cartels in principle and provides only that abuses be punished.

There's a chance the government and industry will reach a formal agreement before the Bundestag takes action. If so, the legislation may be prohibitive in character, but it will be so chock full of loopholes as to be virtually ineffective.

● **Flare-Up**—Around the turn of the year, a bitter fight raged between Erhard and Fritz Berg, top man in the all-powerful German Industry Assn. The fight threatened to upset the cordial relations that had existed between business and Adenauer's coalition par-

ties. In fact, Adenauer achieved his sweeping electoral victory of September 1953 with the help of a sizable campaign fund raised by the same industrial groups that are now fighting Erhard. The Erhard-Berg fight was finally brought under control when both sides realized the political damage being done by this public airing of differences.

But the fight served to harden industry's determination to prevent Erhard from having his way in the cartel issue. It also brought out the basic philosophy on which the bulk of German industry operates.

● **Clash of Views**—Businessmen in general prefer security at a lower level of profits to fighting for higher profits at greater risk. "Safe markets" are the key words in many a German businessman's economic bible.

Aggressive selling, advertising, market research, quality control, and cost accounting are used extensively by many German firms to strengthen their competitive position in foreign markets. But they are hardly used at all for the home market. Goods are simply pushed to designated distributors and wholesalers, who pass them on in turn to designated retailers.

It is exactly this sort of thing that Erhard wants to prevent. He believes sincerely in a free economy where price, rather than price-fixing, is the decisive factor in the marketplace. He believes that businessmen must be prepared to survive in the rough and tumble of everyday competitive selling, both at home and abroad. He often says publicly, "In a free economy there can be no security for the entrepreneur. If security had to be guaranteed, the entrepreneur would have lost his reason for existence and could be replaced by a functionary."

The fact is that Erhard has the record of the past five years in Germany to back him up—the tremendous German economic recovery staged since 1948 in a cartel-free atmosphere. Erhard admits that he would not have freed the German economy of all rationing and controls at the time of the 1948 currency reform if the Allied anticartel laws had not been in effect then. Without these laws, Erhard believes German business would immediately have reinstituted its own controls via price-fixing arrangements.

But Erhard's economic principles fall on unreceptive ears in German industry today. Businessmen merely accuse him of being a college professor, an unrealistic dreamer, and a man who would go broke in a week if he had to



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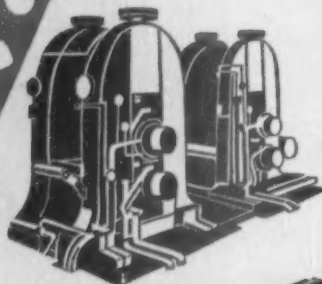
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"... a proposal is now being discussed that would legalize still another type of cartel..."

CARTELS starts on p. 148

meet a payroll himself. Now that a buyer's market has come in Germany and there are signs that the boom is ending, German businessmen are re-pelled at the prospect of competitive selling and unfixed prices.

• **Through the Cracks**—Erhard has already compromised with them to the extent of agreeing that cartels should be allowed under three conditions:

• So-called export cartels would be permitted in order to expand German sales abroad.

• Cartels would be permitted at home where they would make it easier for certain branches of industry to modernize their production facilities.

• So-called "crisis cartels" would be allowed when industries found themselves faced with a serious slump in sales.

A proposal is now being discussed that would legalize still another type of cartel. Certain industries could agree on sales, service, and delivery conditions. For example, the radio industry would be allowed to agree that free repair service for radio sets would be given only during the first six months after sets are sold.

Right now several branches of German industry—coffee, cocoa, margarine, soap, milling, and textiles—are pushing for freedom to set up price-fixing arrangements. If the anticartel law, as finally passed, provides cover for all these, it's bound to be a fairly ineffective measure from the start.

But industry is fighting for even more than this. It wants Erhard to drop a provision in the latest draft of the anticartel law that would put cartel agreements outside the jurisdiction of the regular courts. In other words, industry wants the parties to a cartel to have a legal right to prosecute each other for infringements of any agreement.

It's the view of some American observers in Germany that by one means or another most German industry will emerge in a cartelized form within a few years at most. German industry wants cartels and the government apparently is not ready to risk a real showdown fight on the issue. So even if the anticartel law is dressed up to look like the U.S. antitrust laws, its effectiveness probably can be summed up in a recent remark by a German businessman: Why do we need cartels legalized when all we need is a telephone to make our arrangements?

NEW PATTERNS FOR PROFITS



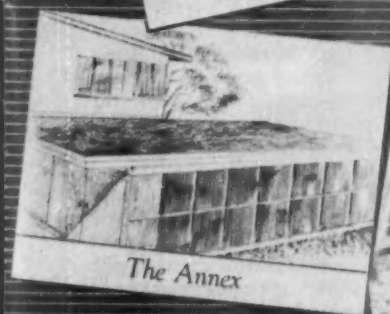
The City Gardener



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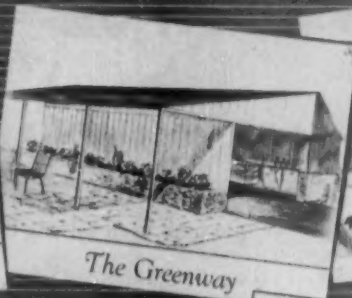
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"upgrading" a garage into a colorful, more useful asset to property value. Translucent panels are available in a score of colors. With these illustrated designs, you can SHOW home owners how their car port, car-port enclosure, single or double garage, garage-patio combination will actually look. Then you can pre-cut material for dozens . . . and secure extra orders for every one you build.

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Auto Merger . . .

. . . teams Britain's Rover Co. and Standard Motor Co. . . . Comet jet takes to the air once more.

Britain's automobile industry came up this week with a new merger—Standard Motor Co., Ltd., and Rover Co., Ltd. It's another sign that British auto makers are getting set for a really tough battle in world markets.

Teamed up, Standard and Rover form an automotive group that is comparable to, though smaller than, the recent Austin-Morris combination—British Motor Corp.—and the Rootes Group.

Standard has been making two passenger cars, one of them a baby car, and the Ferguson tractor. Not long ago it marketed the first British diesel-engine automobile. Also, it's a big producer of the Rolls Royce Avon jet engine.

Rover makes a high-grade, medium-sized passenger car plus a Jeep-like farm vehicle called the Landrover. The Landrover has been picked, ahead of the Willys Jeep, by several European armies. In addition, Rover has developed a gas turbine engine for trucks, and is working on one for autos.

• **Plant**—The two firms match up in terms of plant needs. Standard has a big postwar plant that isn't being fully used. Rover needs space to expand, especially in the gas turbine field. What's more, the Landrover will gain a lot from the worldwide sales organization into which it now has a pipeline.

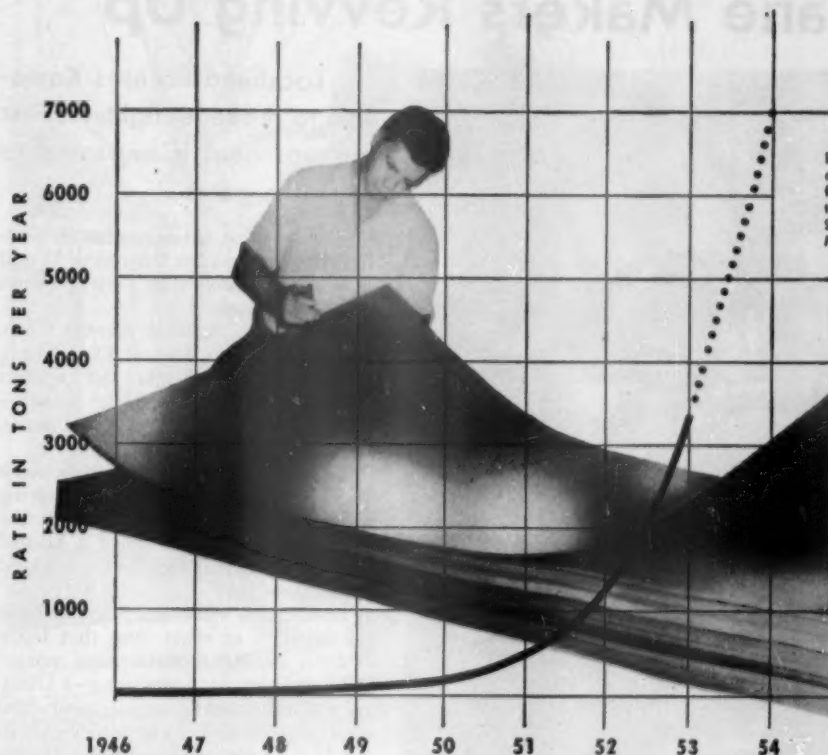
Both companies seem to be in good shape financially. Last year Standard made £3-million before taxes, Rover £1.4-million.

Comet Comeback

Perhaps the most dismal chapter in postwar British aviation ends Mar. 23 when the famed De Havilland Comet, world's first and only jet liner, takes to the air again.

The Comet crash off the island of Elba Jan. 10 brought the grounding of the entire Comet fleet of British Overseas Airways and two French carriers. The experts have been over the planes with fine-toothed combs, and some 50 modifications—shielding the cabin from engines, new vents, fire and smoke detectors, lightning conductors—have been made.

All hands in Britain now agree the Comet is ready to resume flights. The lay-up cost upward of £500,000—plus a dent in the prestige of Britain's planemakers.



Figures indicate total production rate and estimated future production of U. S. titanium sponge metal. Source: Engineering and Mining Journal.

TITANIUM

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Titanium metal production is increasing at a rate never attained by any other metal. The use of titanium in new aircraft provides the impetus for this phenomenal growth. However, an ever increasing number of parts of vital chemical and industrial processing equipment are being designed around this versatile metal.

Its unusually rapid growth is not surprising, for titanium does many jobs that no other structural metal can do as well. Aircraft designers, for example, were quick to take advantage of titanium's high strength-to-weight ratio. Rem-Cru titanium is 40% lighter than comparable grades of stainless steel, but just as strong—and substantially stronger than aluminum.

Titanium is more resistant to many forms of corrosion than any other structural metal. It is an ideal choice for equipment or processes subject to almost all types of corrosive attack.

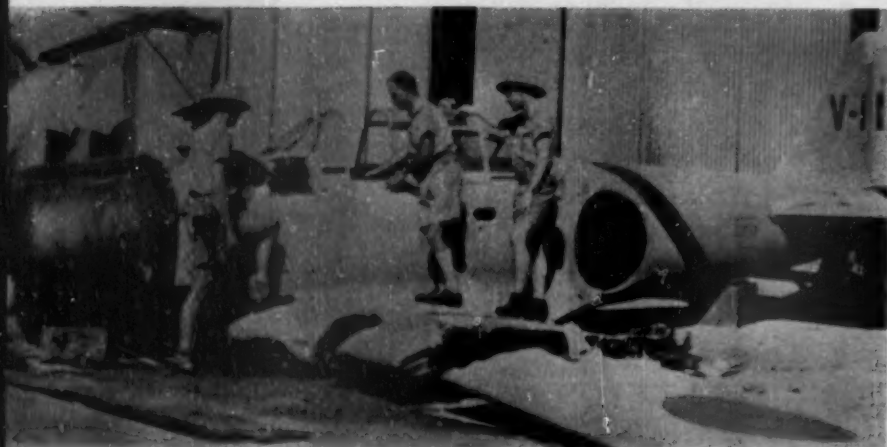
You'll be seeing more and more of this versatile new metal as expanding production facilities make greater quantities available for wider application. Right now, Rem-Cru is producing titanium bars, plates, sheet, strip, wire, tubing, forgings and billets on a tonnage basis.

If you have a product or processing application that titanium may improve, we would like to work with you. Rem-Cru's experience as a principal producer of titanium and titanium alloys is always at your service.

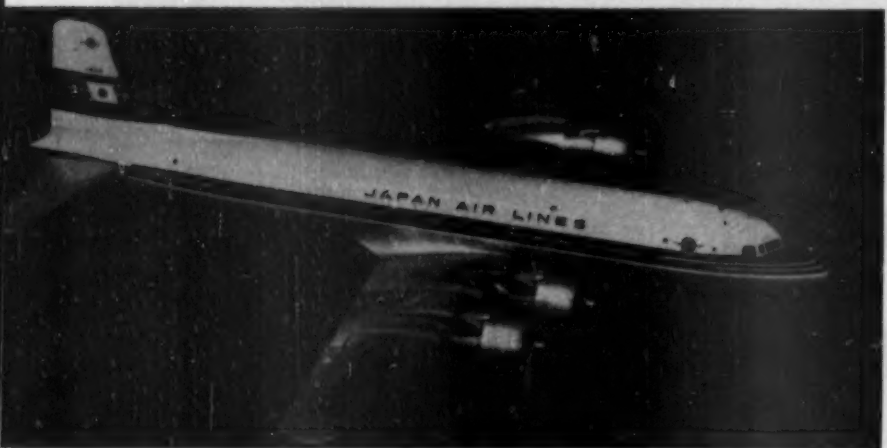
REM-CRU TITANIUM

REM-CRU TITANIUM, INC., MIDLAND, PENNSYLVANIA

Japanese Plane Makers Revving Up



PAST achievements of Japan's aircraft industry include the Zero fighter, famous during World War II. It was turned out entirely by Japanese factories.



PRESENT air service is made up mostly of planes purchased in U.S.—such as the Douglas DC-6B—or of planes assembled from imported parts.



FUTURE planes such as the Starfire jet fighter, which will form the nucleus of Japan's new air force, will be built in Japan with U.S. collaboration.

Lockheed licenses Kawasaki to make jet fighters. First postwar deal is expected to open the gates.

The Japanese aircraft industry, practically grounded since the end of World War II, may soon start putting planes into the air again.

Last week, Lockheed Aircraft Corp. licensed Kawasaki Aircraft Corp., Ltd., to make F-94C Starfire jet fighters (bottom picture) and T-33 jet trainers—using Lockheed designs, machinery, and technical assistance.

This is the first postwar deal between U.S. and Japanese companies involving warplane production. Now that the U.S. and Japan have signed a Mutual Security Pact, it is sure to be followed by similar deals.

Lockheed's agreement comes close on the heels of other signs that Japan is again looking skyward. Last month, the first Japan Air Lines plane—a Douglas DC-6B (middle picture)—returned to international air lanes with flights to the U.S. And the Japanese Air Force—whose wartime Zero (top picture) became famous as the Red Ball Express—may soon return to the air under current defense plans. When it does, it will probably concentrate on jet fighters turned out by Japan's own factories.

• **The Road Back**—These fighters will be the direct result of the Lockheed-Kawasaki deal that is expected to revive the dormant Japanese aircraft industry. Since Lockheed has finished its contract to supply the U.S. Air Force with F-94C interceptors, its production line is ready to supply equipment on short order as soon as the company gets Washington's O.K.

The first jet could roll out of Kawasaki's Kobe plant within a year after the machinery is installed.

There are other deals, similar to Lockheed-Kawasaki's, waiting for the final word: North American Aviation, Inc., is negotiating with Shin Mitsubishi Heavy Industry Co. for the manufacture of F-86 Sabrejet fighters and T-28 fighters; Mitsubishi is also dickering with Pratt & Whitney for a jet engine agreement; Republic Aircraft Corp. and Shin Meiwa Industry Co. are talking about manufacturing F-86s; and Ishikawajima Heavy Industries Co. is bargaining with General Electric Co. for a jet engine deal.

• **Squaring Off**—Tokyo itself is doing a lot of the spadework necessary to get the country's aircraft industry back into production. Last year it organized the Nippon Jet Engine Co., in which four



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There's a reason why a man takes the curb position. It's a custom we teach our sons, even though the original reason for it no longer exists.

In olden days, a city's sewage was dumped in the street. And a gentleman always walked on the outside to keep his lady's skirts from being splashed by passing carriages.

But the engineers who design and build today's sewer systems do more than keep a lady's skirts from being splashed. At the points where they collect the sewage they also build special plants for treating and converting it.

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Being pacemaker to man's progress is a familiar role to the engineer. A disciple of free enterprise, the engineer supplies the "how" that permits collaboration between owner, contractor, financier . . . and brings rivers of water to the desert, spans a continent with roads and bridges, tames raging flood waters, drains swamps, reclaims wasteland, and turns garbage into gold.



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of Japan's biggest aircraft companies are working on jet engine development. Postwar occupation restrictions left the Japanese far behind in this field. To close the gap, a military mission visited U.S. plants early this year to study new developments.

These efforts could eventually put Japan back into the ranks of one of the world's leading producers. That's the position it held during World War II, when it hit a peak of 28,000 planes in 1944. After that, U.S. air attacks reduced most of Japan's aircraft factories to rubble. Allied occupation finished the job by dismantling the remaining facilities and breaking up the kingpin companies such as Kawasaki and Nakajima. Of the major companies, only Mitsubishi was left intact.

The plane manufacturers got their first postwar break during the Korean war, when they were given the job of servicing and overhauling U.S. planes flying combat sorties. The Japanese have been doing this since 1950, at an annual take of \$9-million.

Actual aircraft production has been practically nil. Until the Japanese peace treaty in 1952, output was limited by occupation authorities. Since then, Japan's hesitation to take the rearmament plunge—plus the lack of capital and markets—blocked real progress in plane manufacture.

All told, less than 100 aircraft, most of them assembled from imported parts, have been turned out in postwar Japan. Just about all are the result of cooperation between U.S. and Japanese companies: A Beech Aircraft Corp. agreement with Fuji Heavy Industries Co. for trainers, Kawasaki and Bell Aircraft for helicopters, and Toyo Aircraft Co. and Fletcher Aviation for a small light-plane (BW-Oct. 25 '52, p163).

• **Expansion Plans**—Now, however, the skies are clearer. With the U.S. backing Japanese rearmament, a bill has already been approved by Premier Shigeru Yoshida calling for a Japanese air arm. The Japanese National Safety Board (equivalent to our Defense Dept.) has mapped out a five-year goal for a 1,300-plane air force, including from 500 to 600 jets. This is expected to give Japanese aircraft manufacturers the outlet they've been wanting.

Machinery for all this may be supplied under the Mutual Security Pact, which was signed this week by Washington and Tokyo. It provides an initial \$100-million in U.S. military aid, with more to come later.

Hand in hand with the air force program comes the revival of the Japan Air Lines service. Flying U.S. transports, JAL is planning to add to its transpacific flights to U.S., start service to Latin America by the end of this year, and to Europe and Western Asia in 1955.

BUSINESS ABROAD BRIEFS



B-school for Brazil: Count Francisco Matarazzo, Jr. (above), perhaps Latin America's most fabulous tycoon, is building a \$12-million "university of business" in Sao Paulo. The Matarazzo Institute will be open for some 1,000 students of business in 1956. The Count (it's an Italian title) owns an industrial empire of upward of 350 factories, has a net daily income—so the story goes—of \$100,000.

• **General Motors and Ford** will close down their auto assembly plants in India. The New Delhi government, intent on forcing local manufacturing, has blocked import of unassembled vehicles, and restricted the auto business to Indian companies. Chrysler and Studebaker, affiliated with Indian companies, will stay on.

• **Otis Elevator Co.** is cashing in on the building boom in Peru, has just opened a sales, service, and engineering headquarters in Lima. Otis has made some 350 installations in the city; the next big job will be escalators and a freight elevator for the new Sears, Roebuck store planned for Lima.

• **The detergent revolution** continues in Britain, and the synthetic detergents have captured between 25% and 33% of the soap market—compared to a 53% figure in the U.S. Proctor & Gamble, which leads the pack here, has cornered 75% of the British detergent market through its subsidiary Thomas Hedley & Co., Ltd.

• **Chile's copper crisis** is deepening. There are now 165,000 tons of unsold metal, and still no firm deal with the U.S. for a 100,000-ton stockpile purchase. The Chilean government has refused permission to U.S. copper companies for further deep slashes in production.

Help for U.S. Exporters?

Some businessmen say it's sorely needed. An American manufacturer selling abroad must compete with foreign exporters whose governments give them all kinds of aid.

Time was when the question of financing sales abroad was confined to the specialized shoptalk of exporters, their bankers, and government experts. Now it's emerging as a major problem of U.S. foreign trade, with other exporting nations competing briskly to get back their old markets.

The European exporter has a battery of export aids and incentives, often supplied by his government. The American has little or nothing. What to do about it, if anything, is the nub of a controversy that's now making the rounds of government departments in Washington, and of bankers and businessmen around the country.

• **Handicap**—This hypothetical example presents the meat of the problem:

Amalgamated Widget International is bidding on a multimillion-dollar contract in Latin America. The customer wants to buy American. But he hasn't the hard cash that Widget is used to receiving in its sales abroad, and he asks for two years to pay. Widget can't finance that credit itself, even though the customer is an excellent risk. No commercial bank will touch the loan. Widget can't insure against nonpayment. An Export-Import Bank loan might help, but such loans take time—and are hard to get.

Deutschewidgetfabrik, A. G., a West German manufacturer of the same item, is out for the business—enthusiastically supported by its government. Deutsche-widget has complete insurance facilities handy—against the customer's insolvency, confiscation, freezing of local currency. Moreover, it can offer two, three, even four years' credit, thanks to a syndicate of foreign trade banks operating with government help.

The German firm got the business, and another U.S. exporter was added to a growing list of businessmen who want help in financing and insuring their business abroad.

The question is what kind of help—if any.

I. The Difference

Almost every great trading nation abroad maintains special export credit organizations, wholly or partially subsidized, which extend credit up to five years and longer to exporters. There's also the tradition of merchant bankers who often have centuries of experience with every trick of foreign trade. The exporter of capital goods can usually

count on ample backing for medium-to-long-term credit from bankers as vitally concerned with trade as he is.

In the U.S., however, most exports are financed on cash terms or their equivalent. A relatively small proportion of trade is financed by time drafts—30 or 90 days to pay. The maximum terms a U.S. commercial bank will offer exporters is usually six months.

Beyond that, U.S. bankers won't take the risk, partly because of traditional restraints, partly because many bankers have never had to think in terms of expanded foreign trade business.

• **Ex-Im**—For longer-term credit, the exporter can only go to the government's Export-Import Bank. And even Ex-Im, in the eyes of many exporters, is inadequate.

Its loans are made on a highly selective basis—only transactions that contribute directly to a nation's dollar-earning potential and its general economy are allowed. Ex-Im doesn't offer a continuing credit facility to most exporters. Moreover, Ex-Im operations are cumbersome and slow.

• **Guarantees**—A number of top-ranking foreign trade bankers and exporters are urging more liberal use of Ex-Im guarantees. One scheme has been outlined before the Senate Committee on Banking & Finance by August Maffry, vice-president of New York's Irving Trust Co. The exporter would go to his regular bank for a loan, up to five years, with terms depending on the bank's own policies. Then Ex-Im would guarantee the loan, provided it was in the national interest of increasing trade. The exporter would probably have to assume a small percentage of the risk himself—to keep out fly-by-nights.

The bankers say the senators were favorably impressed. But it is doubtful whether action by the Administration will result. For one thing, the Treasury Dept., which controls Ex-Im's operations, has determined to keep the bank's lending at a minimum (BW—Mar. 6 '54, p142).

II. Other Export Aids

Export insurance is another tool for traders that is maintained by most European nations—as well as Canada. There is growing support for the idea. A recent poll of exporters by the Foreign Credit Interchange Bureau (an affiliate of the National Assn. of Credit Men) found 82% of the replies in

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favor of insurance against exchange freezing, with almost half interested in insurance against bad debts.

That's a lot more support than export insurance has had in the past. Sen. James Murray, Montana Democrat, presents a perennial bill calling for a government Foreign Trade Insurance Corp., with a \$100-million kitty to guarantee traders against credit and exchange risks. But the bill has never had a ghost of a chance of passing—neither exporters nor the government were interested.

• **Pattern**—The keystone of export insurance is Britain's Export Credit Guarantee Dept., set up in 1926. It has a maximum world liability of £600-million, and insures about 35% of all British exports. ECGD has been the model for government export insurance schemes in Canada, Holland, France, Ireland, Germany, Sweden, and Japan. In most cases export contracts are insured against such hazards as (1) exchange restrictions, (2) cancellation of import licenses, (3) war or revolution, and (4) insolvency of the buyer.

Usually the program covers only 75% to 85% of the risk, leaving the rest to the exporter. Since the remaining percent just about amounts to the exporter's profit, it helps keep marginal accounts from unloading the entire risk on the government.

Traders say the problem of export insurance in the U.S. is whether it will work when it's really needed. Most exporters don't feel they need insurance against bad debts on the part of the importer—they usually deal only with reliable businessmen abroad. In fact, credit men say that bad debts in international trade average only one-sixteenth of bad debts in domestic business. The real problem comes when a nation or central bank can't pay its bills in dollars.

There's disagreement over the effectiveness of export insurance in a real blow—like Brazil's 1952-1953 exchange crisis. Sensing trouble, both the British and Canadian insurance departments stopped underwriting exports to Brazil as far back as mid-1951. That made a lot of exporters mad. Many felt they had to keep up trade, though uninsured, and found themselves in trouble later. Other exporters took their government's action as a tipoff. As a result, the debt backlog in Britain and Canada was nowhere near so serious as in the U.S., where the government had to make a \$300-million loan to bail out exporters.

• **Other Gimmicks**—On top of financing and insurance facilities, many countries with inflation at home have used other gimmicks to push their products abroad. In the past, Germany and the Netherlands have allowed exporters to keep a percentage of the foreign ex-

change they have earned. Argentina and Uruguay have often used multiple exchange rates to encourage certain exporters. France exempts exporters from various taxes.

Most of these practices are being progressively abandoned as inflation comes under control; only France still resorts to these tricks in a big way. The U.S. is continually pressuring foreign governments to stop unfair subsidies.

Beyond that, most governments mount direct, large-scale trade promotion programs overseas to make contacts for exporters and sniff out markets and even investment opportunities. They study tastes as well as legal problems.

III. Washington Says No

While a greater number of U.S. businessmen seem interested in expanding government aids to trade, Administration officials and economists present a fairly united front against them.

Washington trade experts feel that, on balance, government-supplied crutches aren't the important factor in stiffening competition. It's more a matter of the greater energy, drive, and traditional exporting know-how—which is forced on other nations by their need for overseas markets to survive. That kind of necessity has never existed in the U.S.

• **Dollar Dearth**—Moreover, the experts insist that the main bar to U.S. exports is the dollar shortage, rather than business risks or credit terms. In a sense, U.S. exports are too competitive rather than not competitive enough: If the foreign importer has the dollars, he usually wants to buy American.

A broad government credit or insurance scheme for exporters might tend to aggravate, rather than alleviate, the dollar dearth. And there's the danger of touching off a world race to subsidize exports—a race that would hurt all concerned. Across-the-board credit and insurance would tend to favor weak U.S. exports at the expense of strong ones in competition for a limited supply of dollars.

Finally, Washington officials argue, these schemes would only postpone the day when payment in dollars has to be made, and like any easy credit system would increase financial irresponsibility among importers, and even exporters.

• **No Change**—Given this kind of attitude in Washington, and divided opinion among exporters, there's little chance of positive government action. Efforts to help exporters will be confined to traditional, and perhaps restricted, Ex-Im operations, plus the continuing effort to reduce the dollar gap by encouraging imports and by occasional aid and government loans.



New York City Skyline from New Jersey

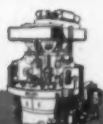
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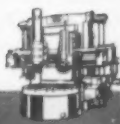
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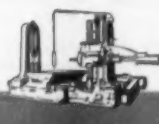
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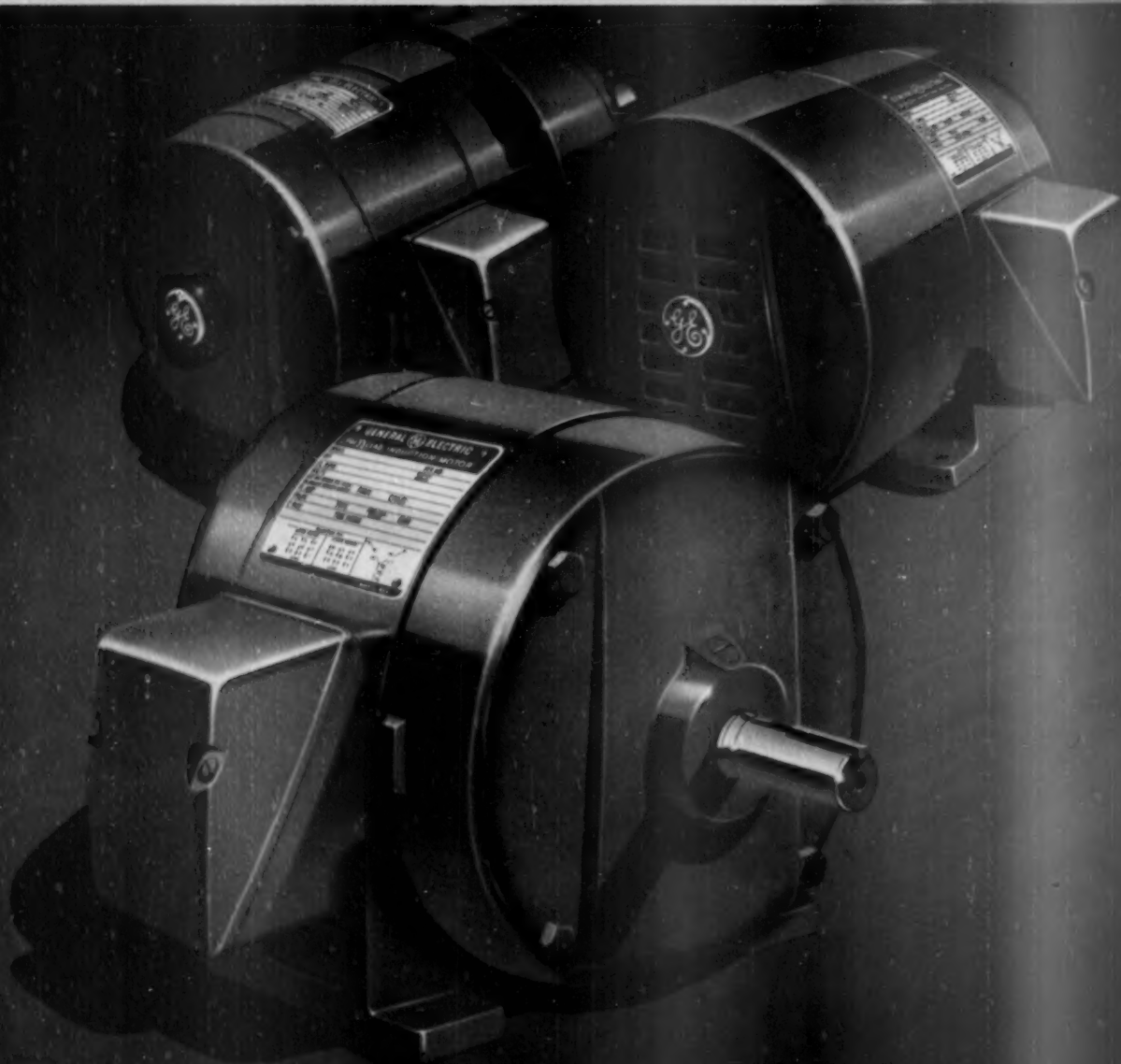


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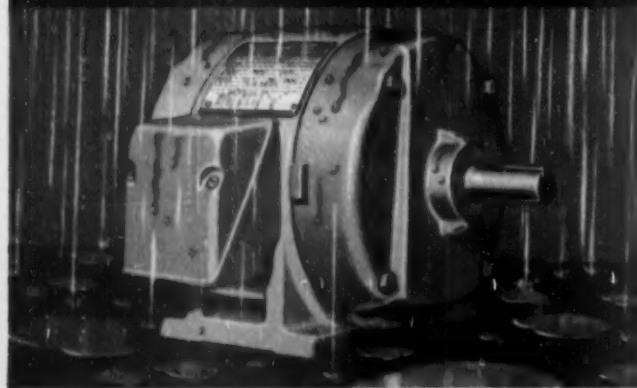


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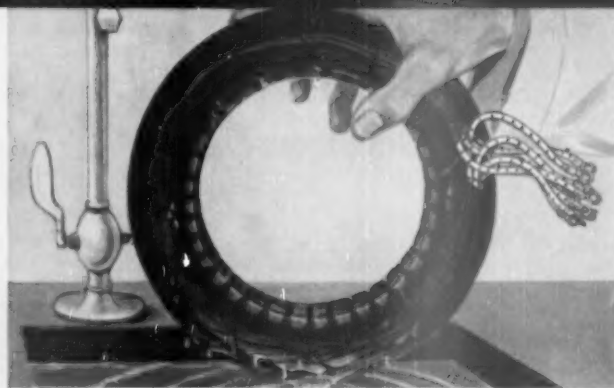
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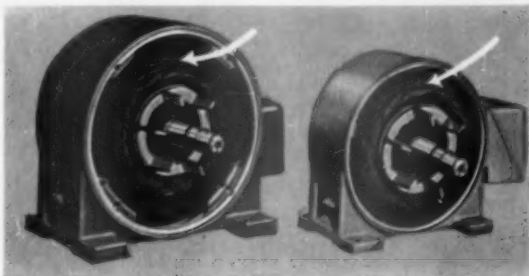
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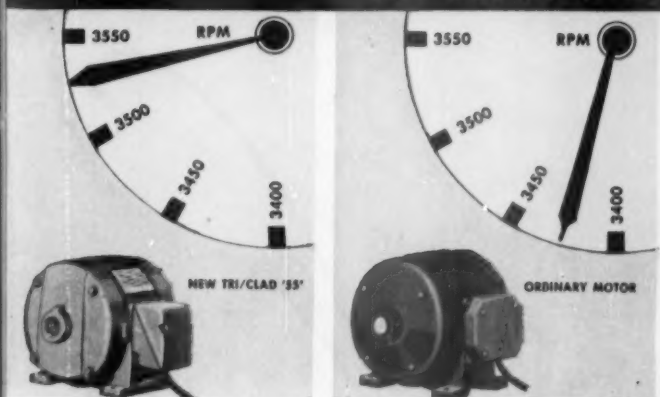
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INTERNATIONAL OUTLOOK

BUSINESS WEEK

MAR. 13, 1954



Secretary of State Dulles has achieved his prime purpose at Caracas—to clarify the U.S. position on hemisphere communism. There's no doubt he has increased Latin American awareness of the dangers of Soviet penetration.

And when the Caracas conference moved to economic problems at mid-week, the U.S. also managed to better its position.

Latins are pleased with Dulles' assurance that the Export-Import Bank will expand its lending for private development projects (BW—Mar. 6 '54, p142). What's more, the World Bank will probably increase its government-to-government loans for economic development.

It's too early to predict what the expansion will mean in terms of the volume of Ex-Im loans.

Tugging and hauling will go on between State, Ex-Im, Treasury, and the World Bank over specific loans—with Treasury trying to keep the volume down to protect its cash budget. But pressure from business and within the Administration to give Ex-Im more rope is growing.

In other ways, U.S. actions are tending to improve hemisphere relations:

- The U.S. is backing Chile's idea for a full-dress interAmerican economic conference.
- President Eisenhower's veto of a tariff increase on wool allayed fears of Latin American woolgrowers.

—•—
Watch for the President's foreign economic policy message, due next week.

It will incorporate the recommendations of the Randall Commission that require fast congressional action. The Treasury's opposition to customs simplification and the proposal to ease Buy American laws has been beaten down—barring a last minute White House switch.

But protectionist congressmen will try to bottle up the Reciprocal Trade Act in committee—with some success. In the end, though, chances are the Administration will be able to force out a bill along the main lines of the Randall recommendations.

—•—
Don't start worrying now about January's sharp drop in U.S. exports. It could be a fluke.

True, Commerce Dept.'s preliminary figures—\$905-million worth of commercial exports—was way below official expectations. January shipments were at an annual rate of \$10.9-billion, at least \$2-billion under the forecast.

But detailed figures aren't in yet. And one month doesn't make an export year. These factors could work for a recovery:

- Soaring coffee prices should give Latin America an extra couple of hundred million dollars pocket money.
- Relaxation of dollar imports curbs, reflecting growing gold and dollar reserves around the world, hasn't yet shown up in our export sales.

Military spending continues at a rising rate, regardless of trade trends

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

MAR. 13, 1954

million short of the expected rate. The betting is that imports will hover around the January figure for a time, then trend upward.

The imponderable, of course, is the curve of business activity here. But there's optimism here and abroad that the U. S. will keep its buying higher than in the 1949 recession. That would be true, some experts suggest, even in a severe U. S. production slide.

—•—

There's more evidence of a topside feud in the Kremlin between Communist party boss Khrushchev and Premier Malenkov (BW—Feb. 27 '54, p134).

Khrushchev has used the pages of Pravda, Communist party newspaper, to attack State Planning Commission chief Saburov. He is a close henchman of Malenkov's and the man in charge of investment in Russia.

Pravda blames Saburov for the present crisis in Soviet agriculture. Recently it blamed Minister of Agriculture Benediktov for the same thing.

Both Malenkov and Khrushchev are vulnerable because of the agricultural mess in Russia. Both have had a big hand in agricultural affairs since Stalin died.

Chances are that Khrushchev can push Benediktov out. Malenkov himself might find it advantageous right now to have a scapegoat—even one of his own men.

It will be another matter for Malenkov and Khrushchev to agree on a successor. For that will determine which one is to control agricultural policy—and what the policy is to be.

The Soviet Premier seems to favor more investment on existing land plus more incentives for the Russian peasant.

Khrushchev apparently wants to return to Stalin's harsh policies. He hopes to boost Soviet farm output by extending agricultural acreage, thus avoid any big shift in investments.

Saburov is under attack, but he's probably safe in his job. He's a member of the Presidium and Malenkov's right-hand man on industrial affairs.

It's possible that Khrushchev is attacking him only to (1) improve his bargaining position against Benediktov; (2) and stall any decision on a basic shift in the pattern of Soviet investment.

—•—

East-West trade got another boost this week—at a session of the Economic Commission for Europe, a U. N. body in Geneva. Here's what happened:

- ECE's Secretary-General, Gunnar Myrdal, just back from Moscow, talked up Russia's need for more consumer goods.

- Pavel Kумыкин, Soviet Deputy Minister for Foreign Trade and the highest ranking Russian official ever to attend an ECE meeting, said that East and West could easily expand trade with each other.

- Josef Ulrich, Czech Ambassador to London, was reelected as ECE chairman for another year, with no opposition except from the U. S.

- French Finance Minister Edgar Faure supported a pet ECE project—establishment of an East-European currency clearing operation similar to the European Payments Union, to be linked with EPU.

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LABOR

Craft Unions Get a Hunting License

● NLRB's decision last week reaffirmed their right to set up enclaves in industrial plants.

● But the invading groups are strictly confined to units of their own craft.

● Both labor and management are still trying to figure out how broad—or how limiting—the new rulings really are.

A wave of head-scratching is sweeping labor and management alike in the wake of last week's National Labor Relations Board decision that reaffirms the principle that craft unions can set up enclaves in industrial plants.

Everyone agrees that the board's long look at an old problem is full of meaning. But they aren't at all agreed on what the meaning is, in terms of new problems for employers, of new craft raids against CIO unions, even of a shaken-up structure for American labor.

Any or all of these things could come after NLRB's long-awaited ruling in the American Potash & Chemical case.

NLRB heard arguments in the case five months ago (BW—Oct.10'53,p168). Many test votes followed before the board finally reached a 3-to-1 decision. The new member, Albert Beson, did not vote; Ivar H. Peterson dissented.

Crux of the majority ruling was that from now on the board will allow elections to sever craftsmen from industrial bargaining units whenever "a true craft group is sought and where . . . the union seeking [representation rights] is one which traditionally represents the craft."

• Clarification—At the same time, NLRB took a stand on three points:

• It specified that the primary test of a "true" craftsman will be the amount of apprentice training or comparable experience required.

• It refused to extend its so-called "National Tube doctrine" of 1948, which bars craft severance in four industries—basic steel, basic aluminum, lumbering, and wet milling. These all have a long history of industrial unit bargaining and are highly integrated in production and maintenance work.

• It liberalized existing rules on the separation of "certain departmental groups which by tradition and practice have acquired craft-like characteristics." The board said it must be given "strict proof (1) that the departmental group

is functionally distinct and separate, and (2) that the petitioner is a union which has traditionally devoted itself to serving the best interest of the employees in question."

• In Black and White—The new decision spells out the board's policy on craft severance more fully than ever before. As a result, says the board, "fewer groups will be severed, but . . . at the same time the principle of craft independence will be maintained."

In the American Potash case, NLRB is allowing (1) a group of electricians to vote on craft representation by the International Brotherhood of Electrical Workers (AFL); and (2) a group of powerhouse employees to vote, as a departmental unit, on representation by the International Brotherhood of Oper-

ating Engineers (AFL). But it turned down the International Assn. of Machinists (AFL) on elections covering pump packers and oilers, riggers, and toolroom keepers—all outside IAM's International Union of Chemical Workers, and the independent, leftwing Mine, Mill & Smelter Workers were refused a plantwide election at American Potash's Trona (Calif.) works. CIO also argued for the plantwide unit.

• Effects—Over-all effects of the new policy can be complicated and may not show up immediately. The provision limiting a union to its own "true" craft may cut down jurisdictional wars between AFL unions; each must now stick to its own kind, as far as NLRB is concerned. That may also, NLRB expects, cut down on the total number of craft severances, because it will limit an invading union to a unit of its own craft—it can't claim other workers even if they're willing. And it may be the death of the AFL-CIO no-raiding pact (BW—Mar.6'54,p150); if NLRB had barred craft severance, as CIO urged it to, the no-raiding cause would have been furthered. Since it didn't, AFL's craft unions aren't likely to give up their carving-out practices.

The ruling also hits IAM's effective practice of whittling away at a plant under an industrial-type contract by



Picketing on the New York Docks . . .

Striking members of the old International Longshoremen's Assn. tied up New York's busy port early this week, as the jurisdictional fight between the union and AFL, which expelled it, stepped up in tempo. Old ILA called the strike an unauthorized stoppage by

workers convinced "the National Labor Relations Board is discriminating against us . . . and for the AFL" (BW—Mar.6'54,p151). Officers ordered the men back to work after NLRB and the courts threatened action for contempt of a no-strike injunction. Meanwhile . . .

carving out craft units of pipefitters, welders, machinists, or just about anyone else; IAM will be limited in the future to machinists.

• **First Target**—The first big tests of the new rules will probably come in the atomic energy industry, now a big organizing target of both AFL and CIO unions. NLRB last year denied a petition for a craft-severance election at an atomic energy plant, noting that a very high degree of integration was involved in its operation. Under NLRB's new policy, a similar petition would apparently bring an election.

• **Two Opinions**—Peterson dissented to the majority decision for pretty much that reason; he said that craft unions are now being given "an open invitation to invade industries and plants where stable industrial-type bargaining relations have existed for a substantial period."

CIO didn't react as he did. Its labor experts are convinced their organizations are better protected from rival unions under the new ruling—if the board adheres to it. AFL, generally, is happy.

• **Reversal**—Management, which had sided with CIO and other industrial unions against craft severance, reacted against the new decision at first. The National Assn. of Manufacturers, for instance, began preparing a heated blast at NLRB. But management's labor experts took a second look at the ruling, decided that it might not be so bad.

UE Faces Biggest Threat As Local Starts to Bolt

The independent, leftwing United Electrical Workers faces its biggest threat yet in the attempted bolt of its Local 301 in Schenectady, N. Y., to rival International Union of Electrical Workers (CIO). If the local makes its secession stick—and officers are confident it will—leftist UE will be dealt a crippling blow.

Local 301 represents some 20,000 General Electric Co. employees in Schenectady—one-fourth of all GE workers under UE contracts. Since UE split left and right in 1949, the local has been one of the main props of UE in its fight for survival against CIO. With Local 301 out, UE faces rough going.

• **The Odds**—Early this week, IUE president James B. Carey and Leo Jandreau, business agent of Local 301, announced the plan to shift the local into IUE. They said local officers had voted unanimously for the move, that executive board members and shop stewards were 95% for it, and that the membership is "probably 90%" for going back into CIO.

Under the circumstances, the shift appears certain—but UE has now thrown heavy strength into a battle to retain the local. Eventually, a National Labor Relations Board election will have to decide who gets the plum.

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... and Outside the Metropolitan Opera

Pickets caused a lot of worry in New York's theatrical district. Stage hands, members of the International Alliance of Theatrical Stage Employees (AFL), quit work at the Metropolitan Opera House to protest year-long contract negotiations. Management said "the show

must go on" and planned to stage Tannhauser without scenery. An hour before the evening performance, stage hands returned to their jobs pending new negotiations on a contract offer by the Metropolitan. Bulky stage sets went on quickly, without a hitch.

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Squeeze Play in Pittsburgh

The government, dragged into a dispute involving some of the city's big stores, has been accused both of (1) helping break the strike and (2) subsidizing it.

As an 11-union strike against major Pittsburgh department stores entered its fourth month last week, the federal government found itself caught squarely in the middle. Verbal brickbats rained on its ears from both sides.

Here's how the government, all unwittingly, got itself involved:

- To keep shelves filled with merchandise during the strike, and to facilitate deliveries, the stores have been using parcel post (BW—Dec. 12 '53, p. 50). The Brotherhood of Teamsters (AFL) Local 249, key union in the dispute, complains that this amounts to using government facilities for strikebreaking.

- From the other side, there's mounting criticism against a plan to distribute government-held surplus foods among the strikers. Some store people growl that this would be tantamount to government subsidization of the strike.

- **Stubborn**—As the government undoubtedly realizes, tempers are hot in Pittsburgh. The strike is pinching both the AFL workers and the stores. But neither side is willing to back away from the bargaining line it has held since the strike started last Nov. 27.

Negotiations seeking an end of the walkout are continuing, but at midweek they showed few signs of progress. Mostly, strike talks have become desultory and almost pointless. The one thin ray of hope this week seemed to be that Dave Beck, president of the Brotherhood of Teamsters, might "at the right time" intervene personally to end the long-deadlocked dispute.

- **Good Strategy, But**—The union group, spearheaded by the Teamsters' Local 249, struck at a strategic time—the beginning of the 1953 Christmas shopping season. They expected a quick cave-in by five downtown department stores, including Kaufman's, Horne's, and Gimbel's; and six furniture stores. The strategy failed. Stores—hard hit by a pre-Christmas strike once before—had prepared in advance for a walkout. Goods filled almost every available inch of free space. Since clerks continued to report for work, stores were able to keep open and reasonably busy.

As the strike dragged on, stores resorted to parcel post to keep soft goods in ample supply. Unions protested, but Pittsburgh Postmaster James C. Smith replied that "absolute neutrality" governed the Post Office's activities—that prestrike arrangements on

parcel-post pickups and deliveries hadn't been changed at all.

- **Out of Favor**—Meanwhile, Dave Beck, president of the Teamsters, refused to sanction Local 249's strike. Beck and the international union called the Pittsburgh walkout ill-advised, contending that the local had not used all orderly processes of bargaining.

Most of the strike issues were raised by employers. They sought the right to make some deliveries by parcel post; to decide which trucks should have helpers assigned to them (now, all must have them, whether needed or not); and to revise union-shop and seniority clauses to make possible a weeding-out of some employees hired in the past five years and found to be misfits. The Teamsters' international office urged that these be arbitrated, along with a Local 249 demand for a 25¢ raise.

The international's refusal to sanction the walkout barred payment of \$15-a-week benefits to Pittsburgh strikers from the Teamsters' big treasury. As the long walkout cut down reserves, the jobless Local 249 members looked elsewhere for help.

- **Food Relief**—The government's stockpiled food supplies shaped up as one source of relief. These are being released, on state request, for distribution among the needy in areas of heavy unemployment.

The Pittsburgh Central Labor Union (AFL), which has backed the Local 249 strike despite the international Teamsters' stand against it, called for surplus food relief for the needy in the Pittsburgh area. The State of Pennsylvania and Allegheny County supported the request and ordered emergency supplies for some 50,000 needy.

As a start, the federal government allocated two railroad carloads of butter (about 28,800 lb.), four carloads of canned beef, two of processed cheese, and two of dried milk. Allegheny County undertook to distribute the food and to pay storage and distribution costs.

Technically, these supplies are not going to be released specifically to help strikers, but for all the needy in the Pittsburgh district. However, there is little doubt that the Pittsburgh CLU had the striking unionists uppermost in mind when it advocated emergency food aid; it quickly put in a list of 9,000 persons that it said needed assistance—mostly strikers and members of their families.

BUSINESS IN MOTION

To our Colleagues in American Business ...

Like other companies whose people do outstanding work, Revere receives many letters of appreciation. They are a source of great gratification, first because we want to render service, and second because good work shows that the way we select, train, and promote men to positions of responsibility is the right way. Let us quote from a recent letter.

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"On his visit to our plant last month, he helped us to establish sound procedures and in so doing, eliminated several expensive errors we were unknowingly making. We are especially grateful to him for the energetic way in which he went about his work, in spite of physical difficulties encountered due to our plant being in full operation. We appreciate his patience in answering all questions with which he was bombarded by operators, supervisors, and management alike.

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siderably if customers could be shown how to make perfect welds, quickly and at minimum expense. A Welding Section was set up within the Research and Development Department, where it was given full laboratory facilities. The activity was organized on both scientific and practical lines, with capable personnel who have solved many problems. In one case, two men were flown to a customer's plant, where they worked 20 hours a day over a weekend, and by Mon-

day afternoon had the satisfaction of seeing the customer's operators turning out perfect welds, saving a substantial sum in penalties for delayed delivery.

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These states
averaged the highest
disqualification rate
over the period of
a year



Ohio
Iowa
South Carolina

Oct.-Dec. 1952
Applied
This many unem-
ployed wanted
it...
Refused
... but out of
every thousand
applicants, this
many were turned
down

Jan.-Mar. 1953
Applied
Refused
(Per 1000)

Apr.-June 1953
Applied
Refused
(Per 1000)

July-Sept. 1953
Applied
Refused
(Per 1000)

373,013
55,133
97,897

43.4
45.4
53.7

476,836
108,879
174,714

42.4
35.9
36.3

432,158
67,275
161,188

39.2
36.5
41.1

397,004
60,385
176,968

47.3
47.7
38.5

AVERAGE STATE

223,938

21.2

304,294

18.7

264,700

21.7

247,291

24.4

These states
averaged
the lowest



Florida
Pennsylvania
Kentucky

131,575
1,228,860
197,495

9.1
9.9
6.4

94,766
1,614,596
247,933

15.6
7.5
5.7

127,189
1,408,079
247,726

16.0
10.7
6.0

213,512
1,407,958
204,871

10.6
12.3
7.0

Date: U.S. Dept. of Labor.

BUSINESS WEEK

It Depends On Where You Are

The CIO council in Ohio, bothered by rising unemployment, has taken a close look at a chart something like the one above. The council isn't happy, and it's easy to see why. Ohio is one of the states that turn down the biggest proportion of applicants for unemployment compensation.

Over the 12-month period covered by the chart, Ohio employment insurance agencies turned down 42.9 of every 1,000 applicants. Kentucky agencies, on the other hand, disqualified only 6.2 applicants.

• **Ways of Thinking**—The CIO council is embarking on a campaign to bring Ohio's disqualification rate down nearer the average. Unemployment compensation is a state matter, rather than a federal one, so the council will undoubtedly attack Ohio's disqualification laws. But it will have to go further than that to make a real change, for the differences among state laws alone do not come anywhere near explaining the

wide differences among turndown rates.

Actually, no one can explain the differences in terms of cold facts—in terms of laws, statistics, bare charts, and tables. To get the satisfactory explanation, you have to dig into intangibles. You have to look at local customs, local ways of thinking, and local employment patterns.

• **The Laws**—These local variations take off from a fairly basic set of laws. Applicants for compensation are disqualified in every state for such reasons as voluntarily leaving a job without good cause, getting fired for misconduct, and refusing suitable work. Ability and willingness to work make up another requirement.

These basic laws are fairly standard throughout the U. S., though each state has its own variations—and some states add extra requirements of their own. But even if all the state laws were identical, there would still be a wide margin for fluctuation. Each case is

decided, to a large extent, on the local level. And here's where the intangibles enter the picture.

• **Opinions**—The laws themselves aren't specific. There's a lot of room for subjective opinion. Case after case presents a problem for local agency decision. It takes individual judgment, for instance, to decide what is "good cause" for leaving a job, or what constitutes a "reasonable" or "diligent" effort to get a job.

This judgment is likely to be influenced by all sorts of factors in the local environment—local moral standards, social patterns, philosophies of life. Suppose a woman worker left her job to follow her husband, a soldier, to a far-off military base. One community might consider this "good cause"; another might consider it a flimsy excuse for quitting.

Then again, local decisions might be influenced by pressure from outside. Critical stories in the local press, union



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protests, political pressures can all have their effects on the way cases go.

• **High and Low**—Figures from the federal Bureau of Employment Security suggest other reasons for the differences among disqualification rates. The bureau has found out, for instance, that states consistently report the highest rates during periods when employment is high.

There could be several reasons for this. When employment is high, jobless pay claims are low. That means the employment agency staff has more time for a thorough investigation of claims, and is likely to turn up more reasons for disqualification. During busy periods—when there are many claimants clamoring for attention—the staff is likely to pass a good number of claims with only a quick examination.

And when employment is high, those who really want a job can find it. More and more of those who apply for unemployment pay are likely to be people who really don't want to work. These are clear disqualification cases and show up easily. Hence the proportion of turndowns is high.

• **Efficiency**—Another factor that will tend to increase a state's turndown rate is an increase in administrative efficiency—which very often means an increase in agency staffs. When more people are working more efficiently on claims, the probable result is that more reasons for disqualification will be turned up—just as they are when the number of claims drops.

Inefficiency generally lowers the disqualification rate—though sometimes it can raise the rate temporarily. The Chicago Sun-Times, currently scrutinizing compensation affairs, cites the case of a woman who was disqualified on grounds of not having shown "reasonable diligence" in seeking work. She appealed, complaining that illness had kept her in bed during the time when she might have been job-hunting. She won her case. The Sun-Times says such administrative errors are common in the Chicago area.

• **Employers**—In Toledo, both AFL and CIO unions blame employers largely for Ohio's high turndown rate. It's in the interest of almost any company to have as few of its ex-employees drawing jobless pay as possible. All states have some form of "experience rating"—whereby a company's payments into the state unemployment fund are figured according to the number of its ex-employees drawing compensation.

The Toledo unions say that some companies hire actuarial firms to protest, wholesale, all claims filed by those companies' ex-employees. Most of the claims are paid eventually, the unions say, but the protests succeed in holding up qualification for a long time.

Actually, companies throughout the

U.S. file many individual protests—and this ups the disqualification rate a good deal. Some big companies have full-time experts devoted to the task of checking up on unemployment claims.

Pension Plans . . .

. . . for workers in small companies spread, as UAW gains coverage for six small Detroit industries.

The United Auto Workers (CIO) and six small firms employing 600 persons last week put into effect an area-wide pension plan for small, diversified industries in Detroit. It was the first move in a new UAW campaign to extend pension coverage to many employees of small firms nationally.

Although significant of demands to come in Cleveland and other cities in which UAW has many small contracts, the Detroit program is neither new nor without precedent in UAW. The auto union has had two pilot plans in effect since 1950.

One, in Detroit, covers 73 shops in the tool-and-die industry, and permits the transfer of pension credits among firms affiliated with Detroit's Automotive Tool & Die Manufacturers Assn.

The other, in Toledo, was set up in November 1950 by Richard T. Gosser, UAW vice-president, acting independently of UAW's national office (BW—Nov. 4 '50, p. 120). It now covers 27 small companies in diversified industries, employing 2,100 persons.

• **Pension Differences**—The new Detroit program differs from that already in effect there because it is not limited to a single industry. It is similar, however, to the Toledo program—long considered a test for what the auto union eventually planned to seek from small employers nationally.

The Detroit program permits the transfer of pension credits among participating employers. Employees who quit or are discharged from a shop have up to 18 months to find work in another covered shop without losing accumulated credits; if they are laid off, they are protected against loss of credits for three years. Once an employee accumulates 20 years of service credits, his rights aren't forfeited even if he leaves the pool permanently.

The new Detroit program provides pension benefits of \$1.75 monthly for each year of service, up to a maximum \$52.50 a month exclusive of social-security payments. That means a maximum, including social security, of \$137.50 a month for those retiring at age 65 after 30 years' service; the Toledo plan has a \$117.50 maximum now,



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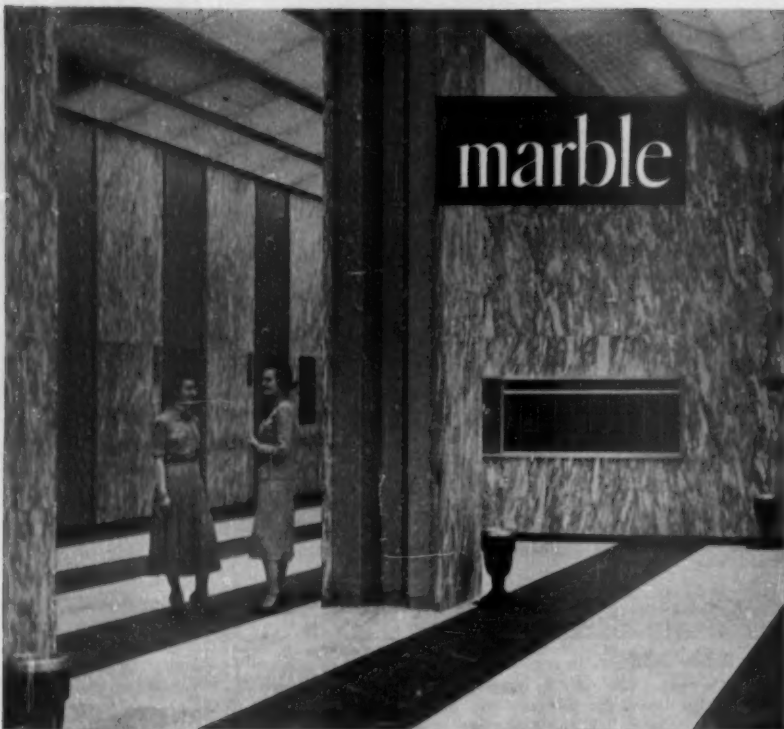
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although an increase to \$130 has been agreed on and is now awaiting Treasury Dept. approval.

The Detroit plan will be financed by employer payments of 8¢ an hour; the Toledo plan costs 7¢ an hour. Both programs are administered by joint labor-management boards, which are authorized to extend the coverage of each plan to additional firms that accept the terms in contract bargaining with UAW.

LABOR BRIEFS



Appointment of J. Ernest Wilkins (left) as Assistant Secretary of Labor for International Affairs was sent to Congress for confirmation last week. Wilkins, 60, Chicago Negro attorney, is vice-chairman of the committee President Eisenhower set up to fight race bias on government contract work. Labor Secretary James P. Mitchell (right) recommended Wilkins—who is the first member of his race to hold a cabinet or subcabinet job. Wilkins succeeds Spencer Miller, Jr., who resigned.

The annual wage plan that the United Auto Workers (CIO) will push in 1955 is "now ready for the bargaining table," a union spokesman says. It isn't a "pie in the sky, cost unlimited" plan, he adds, but one "well within the cost limits of a legitimate wage increase." UAW will unveil the plan at an educational conference in Chicago in April.

A joint pay demand was placed before Armour, Swift, Wilson, and Cudahy last week by AFL and CIO meat-packing unions. The two organizations (frequently mentioned in merger reports) won a 5¢ raise and other contract gains in coordinated bargaining in 1953. Their "Big Four" pacts run to Sept. 1, but pay demands are possible now under a wage-reopening clause incorporated in all contracts.



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THE MARKETS

Post-Election Trend:



Two Roads for Commodities

If you have been seeking clues to the course of business in the Bureau of Labor Statistics index of cash commodity prices, you haven't been seeing much action.

The index, with 1947-49 as 100, now stands at around 87.9. This is a decline of only 3.8% under the 91.4 at the start of 1953, when industrial activity was rolling along at close to top rates.

That's the over-all picture. But if you divide the commodities up into foodstuffs and industrial raw staples, you'll get a truer insight on what has happened since the beginning of 1953, when the stock market hit its post-election high and steel mills were starting a three months' period of 100% capacity operations.

Foodstuffs, which had a bad time late in 1952, have been following an irregularly upward course (chart, above). They now stand 13.3% above their January 1953 level.

On the other hand industrial raw materials as a group have declined 13.8%, just about as much as foods have risen.

• **Motives**—The decline in industrial raw materials prices closely parallels the

dip in general business activity. The BUSINESS WEEK index (page 21) now stands 12.1% below the peak recorded last July.

Any housewife can tell you what foodstuffs spearheaded the advance of the past year or so. In the van were many pork products and lard, reflecting the conclusion of many hog growers that it wasn't economical to fatten pigs with extremely high-priced corn. Coffee (while not in the BLS index) moved up sharply, too, and with it climbed cocoa beans and tea.

In the industrials sector, however, a long list of staples are selling below the levels of the beginning of 1953. The list includes copper, lead, zinc, tin, rubber, hides, burlap, print cloth, wool tops, and steel scrap.

• **No Rout**—The sharp drop in steel scrap shows how the price of a raw material moves in fairly direct proportion to its use. Steel mills, which were operating at 100% of capacity at the start of 1953, are running at only 68.9% this week. And No. 1 heavy melting scrap, which was selling in Chicago at \$40 a ton last March, now commands only \$25 a ton.

Many trade analysts see a good omen

in the fact that industrial raw materials prices as a whole have declined so little since the "rolling readjustment" in business began. A sharp recession in business usually is preceded by a tumbling in materials values. Thus far, there has been no all-out rout in staples.

• **Metals**—This week, in fact, some nonferrous metals were firming. Lead was marked up to 13¢ a pound, New York, in two consecutive daily hikes of ½¢ each. These were the first lead advances in eight months. Producers said improvement in demand began a fortnight ago as users resumed buying after working down inventories gathered for yearend tax purposes.

There were also reports that the government might resume buying of lead and zinc for stockpile. There has been no reserve stockpiling of these metals

in the past year, and lead-producing cities have been feeling the effects of slow production.

The rise in cash lead touched off advances in futures of lead, zinc, and copper.

Tin forward contracts advanced following a Monday 3¼¢ rise to 90¼¢ a pound. The hike was attributed to a State Dept. announcement that the U.S. would withhold its excess tin stocks from the market.

• **Warning**—Metal men warned, however, that this week's strength in nonferrous metals should not be taken too bullishly. Top officials of Phelps Dodge Corp. predicted that the copper supply will exceed demand when Chile's full production is marketed, and that cuts may be coming in copper production—and prices.

Favorites Fade in the Market Stakes

It's a hoary old Wall Street maxim, proved true year after year, that the only consistent thing about the market is its inconsistency. Dark horses leap from nowhere to lead the pack, while the favorites often fade, and badly.

The compilation below offers striking evidence of the volatile nature of common stocks, even the bluest chips. Adapted from a table by Keystone Co. of Boston, it points up postwar shifts in the 30 stocks in the Dow-Jones industrial average, in terms of percent gains or losses. Of the top five stocks in 1952, only two, American Can and

General Electric, maintained the pace in 1953, while the top five stocks of 1951 are nowhere in evidence among last year's leaders. United Aircraft vaulted into first place in 1953, while Chrysler and General Motors, reflecting the general softness in motors, tumbled from first to 30th and from second to 25th respectively.

In the first nine weeks of 1954, three of last year's five leaders have already slumped, General Foods from third place to 27th, du Pont from fourth to 22nd, and American Can from fifth to 30th.

Common Stock	1946	1947	1948	1949	1950	1951	1952	1953	*1954
Allied Chemical.....	15	10	17	15	19	6	22	17	13
American Can.....	19	23	8	8	29	8	8	8	30
American Smelting.....	18	20	16	25	10	8	28	29	12
American Tel. & Tel.....	20	24	10	27	22	22	21	15	18
American Tobacco.....	16	26	25	9	30	27	18	18	26
Bethlehem Steel.....	9	6	19	26	8	20	13	22	9
Chrysler.....	29	1	29	6	23	24	1	30	25
Corn Products.....	8	25	21	8	25	23	24	7	19
E. I. du Pont.....	6	15	11	1	7	16	17	4	22
Eastman Kodak.....	7	18	13	21	20	25	25	8	8
General Electric.....	25	17	8	19	17	9	8	8	8
General Foods.....	22	27	8	11	26	26	8	8	27
General Motors.....	28	9	9	10	11	13	8	25	14
Goodyear Tire & Rubber....	13	28	15	22	4	4	4	14	10
International Harvester....	24	8	23	23	18	17	27	26	11
International Nickel.....	14	29	8	29	12	10	11	28	17
John-Manville.....	12	22	18	8	24	8	12	24	21
Loew's.....	26	30	30	12	27	15	29	12	7
National Distillers.....	17	21	27	7	15	7	30	27	23
National Steel.....	4	13	4	24	1	21	26	21	15
Procter & Gamble.....	10	7	20	8	13	30	23	11	16
Sears, Roebuck.....	1	19	7	17	16	19	14	10	28
Standard Oil (Cal.).....	8	8	6	28	8	14	9	23	4
Standard Oil (N. J.).....	8	8	22	30	6	1	20	20	6
Texas Co.....	8	14	26	16	8	8	19	13	8
Union Carbide & Carbon....	11	12	1	18	14	12	10	9	29
United Aircraft.....	30	8	12	14	9	18	6	1	8
United States Steel.....	21	11	24	13	8	29	15	19	20
Westinghouse Electric.....	27	4	28	4	21	11	7	6	1
P. W. Woolworth.....	22	16	14	20	28	28	16	16	24

* Through Mar. 5th.

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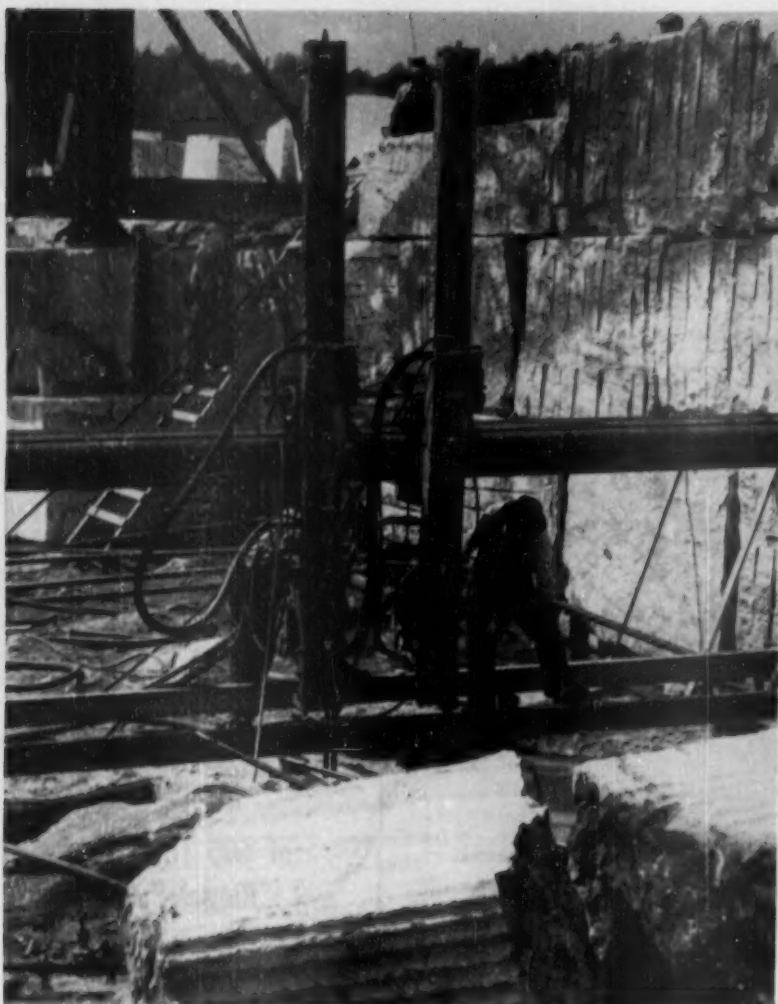
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LOCAL BUSINESS

KLEE Lingers On

HOUSTON—One of the wondrous beasts in Alice in Wonderland was the Cheshire Cat, which gradually faded away until only its smile remained. Houston has more or less the same thing—with a TV station.

Ever since last September, KPRC-TV, Houston's Channel 2 station, has been getting reports from England of what seems suspiciously like the cat's doings. Viewers there have written about seeing the call letters KLEE-TV on their screens, along with snatches of TV shows. Some have photographed the phenomenon, all have been puzzled by it.

Now the mystery of it all is this: KLEE-TV used to be Houston's Channel 2 station. But it went off the air in July, 1950, and its spot was taken over by KPRC-TV. Why should even its smile be lingering? And in Britain, of all places?

In an effort to find an answer, KPRC-TV called on some of the top scientific brains at Rice Institute. These tended to dismiss the whole thing as signals being sent out by amateurs using unauthorized call letters.

But then Rice professors probably don't believe in Cheshire Cats.

Upping Low-Grade Ore

LANSING—With a wary eye on Minnesota and the future, Michigan is perking up interest in its low-grade iron ore deposits on the Northern Peninsula. The state legislature is being asked to appropriate \$723,000 to build a research laboratory for metallic ores at the Michigan College of Mining & Technology at Houghton.

A major function of the lab would be to explore ways to beneficiate the low-grade iron ores in Michigan, which one estimate put at more than 720-million tons.

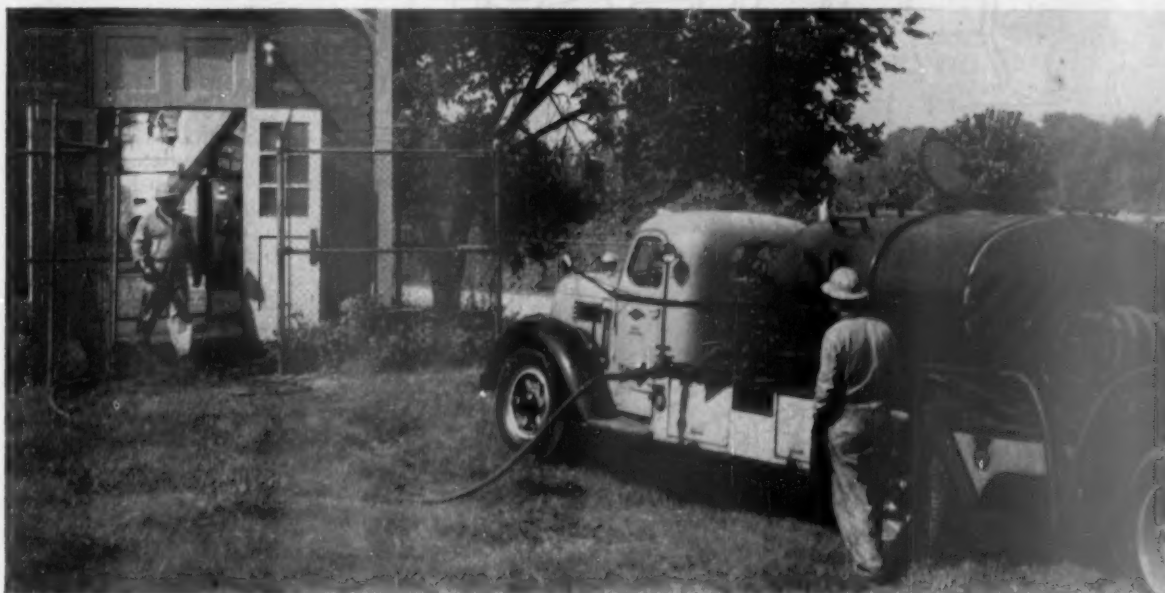
So far only one company—Cleveland Cliffs Iron Co.—has begun shipping low-grade ore from the Upper Peninsula. It has had a project operating near Michigander for two years, and is about ready to start a joint enterprise with Ford Motor Co. at Humboldt. One more entry is North Range Mining Co., which is getting ready for production at Alpha.

Bargain Tokens Flop

NASHVILLE—The Nashville Transit Co.'s tryout of cheaper tokens for bus rides (BW—Oct.31'53,p62) has flopped hard. The company has

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A well drilled to a total depth of 205 feet into Niagara limestone had declined to 70 gallons of water per minute—a rate far below its capacity to produce. Needless to say, management was quite concerned about the increasing costs of its water. Dowell Service was called in to survey the job. First tests showed the pump to be clogged badly with iron deposits. Other tests showed the entire well system to be fouled with the same material.

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UNITED STATES STEEL

dropped its "bargain" rate schedule and gone back to the old price list.

NTC shaved token prices—from three for 35¢ to nine for \$1—last October in a move to step up passenger volume. Since then, it has lost an average of \$3,000 a month. H. H. Bailey, general manager of the company, says that before the price cut 43% of all passengers eligible to use tokens bought them. After the change, token use dropped to slightly less than 31%.

One possible explanation for the riders' aversion to economy: A lot of people were unwilling to fork over a dollar at a time for the tokens.

Welcome Addition

MIDDLESBORO—The drive to bring new industries into this south-east Kentucky coal town has begun to pay off. Corunna Mfg. Co., a producer of television and radio cabinets, announced plans last week to build a 52,000-sq. ft. factory here.

Middlesboro, which has lived and eaten on coal (it even has a building made out of it) has had to tighten its belt these past few months as mine output has been cut back. The new plant means it should be able to loosen up again. Corunna will eventually employ about 1,000 people.

Update

BIRMINGHAM—Local merchants have dropped the first round in their fight to hang onto "giveaway" contests (BW—Nov. 28 '53, p52).

In Circuit Court, Judge Alta King ruled that the contest sponsored by R. B. Broyles Co., Inc., a furniture retailer, ran afoul of the state's lottery law. Broyles had been using a TV show to award prizes based on a drawing of slips signed by people at the store.

Allen Clark, Broyles' general manager, has said he will appeal King's decision. He maintains there is no lottery since there is no element of consideration; people aren't asked to buy anything. The prosecution argues that having to go into the store to register was consideration enough.

The Pictures—C.B.S.—27; Douglas Aircraft Co., Inc.—32, 154 (ctr.); Arthur Fillmore—48, 49; General Motors Corp.—92 (bot.); I.N.P.—154 (top); Bob Isear—52, 60, 61; Herb Kratovil—60, 61, 124; Nick Lazarnick—192; Archie Lieberman—cover, 74; Lockheed Aircraft Corp.—154 (bot.); National Research Corp.—142; Reynolds Metal Corp.—92 (top); U.P.—82 (bot.), 166 (bot.), 174; W.W.—88 (bot.), 167 (bot.).

What the **BIG TRUTH***

and

KEWANEE



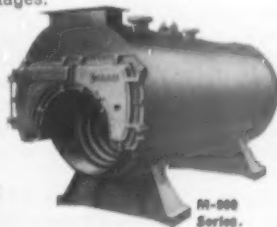
mean to the boiler owner...

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PERSONAL BUSINESS

BUSINESS WEEK

MAR. 13, 1954



Your chances of being recalled to active duty as a reservist are growing slimmer by the minute. So are the chances of your employees or children being drafted.

In fact, the military services are trying to get rid of nearly 400,000 men now in uniform before next year. That means a picture like this:

- **Reserve:** None of the services is recalling any reservists or has any plans to. Even reserve officers who wish to remain on active duty are finding their requests turned down.

- **Draft:** You'll hardly notice it's going on, since it will be spread across the states. Selective Service will continue to call less than 18,000 men per month. Calls will drop off even more by fall. (Note that the present draft rate is about one-fifth the peak of 80,000 per month average maintained right after the Korean war broke out.)

Current armed-forces strength is in excess of 3.2-million men. By mid-1955, the services should be near 3.2-million—probably the maintenance level.

So new men going in will simply replace those whose hitch is up. The military aim is to build a trained civilian reserve, not a big army.

Men who do go into uniform stand a far better chance of learning a useful skill than their World War II counterparts. Every man now entering service will get a minimum of six months' training (more for Air Force and Navy).

The emphasis is on new weapons and machine power rather than manpower. Army privates, for example, now have a wide range of technical training schools open to them. Among them are guided missiles, electronics, chemical and biological warfare, engineering.

Also, both the Air Force and the Navy have liberalized pilot-training requirements, now take high-school graduates. And note that various types of atomic activities are open to men of all services.

Industry will benefit from much of the training now available to men in the armed forces. It's solid enough so that veterans can put their armed-forces skills to positive work when they return to civilian life.

But there are some hitches for industry, too. If you are advising a young man to go into uniform, remember he faces a total of eight years obligated service—a minimum of two years active duty and the rest in the reserves. So if he returns to your plant, you'll have to allow him time off for reserve activities, and be prepared to lose him when Uncle Sam calls.

And remember that the draft age limits are different now. A man once deferred is still subject to call up to 35 instead of 26.

In addition to training, GI benefits offer a big attraction to younger men. Korean veterans have the same benefits as veterans of World War II, with a couple of technical exceptions. Under a new law written after Korea, they get housing, rehabilitation, on-job training, etc.

And World War II veterans who have used their benefits may, in some cases, get them over again if they also served in Korea.

Remember that induction can mean a drastic change in your tax

PERSONAL BUSINESS (Continued)

BUSINESS WEEK

MAR. 13, 1954

picture. If you have a dependent son who is inducted, for example, you may take him as an exemption in the year of his induction if you contributed more than half his support—and provided the armed forces haven't paid him more than \$600.

And a draftee who makes \$600 a year is in the same boat as a civilian—he must file a return and pay a tax. But certain pay—such as that for service in combat zones—is not taxed.

Family allotments are not income to the family. The part that's deducted from a serviceman's pay is his income; the part paid by the government is a gift.

Follow certain rules when buying rose bushes at department stores or hardware-garden shops. Housewares Review, a trade magazine, points out that you can get good ones—if you're careful. It offers these tips for getting bushes that are healthy and strong:

Roots of a healthy rose bush are yellow in color, should be from 6 in. to 12 in. long.

Canes for the No. 1 grade hybrid tea roses (most popular of all) should be three in number and at least $\frac{1}{2}$ in. in diameter. No. 1½ grade should have two strong canes plus one other less strong. The No. 2 plant should have one strong cane and one other cane. Pruned climbers should have canes at least 24 in. long.

Here's a refresher on the main types of roses:

Hybrid teas bloom almost continuously from early spring to late fall. Each year new varieties join the several thousand known ones.

Polyanthas work well as borders and in mass plantings. They grow low, bloom in clusters of single or double flowers. (Floribundas are similar, but grow taller, have larger blooms in clusters.)

Hybrid perpetuals are rugged, grow higher with larger blooms than the teas. But they bloom only in June and July, with an occasional flower in August.

The finish on any car quickly collects chips, nicks, stone bruises, and scratches. Retouching them so they match properly is tough.

A kit to help you do the job properly is now on the market. It sells for \$1, complete with a small bottle of paint to match your car, polishing paste, proper brushes, mixing paddles, and explicit instructions. Put out by Color-Pak, 320 Broad St., Summit, N. J., the kit is said to give the user all advantages of the "trade tricks" to assure a good job.

The du Pont auto paint is freshly packed for each order, which the company claims insures accurate matching because it cuts pigment settlement. Any factory color for any American car is available.

Watch for the M-G-M film version of Cameron Hawley's novel, Executive Suite (BW—Dec. 6 '52, p106), due for release in April. Those who have seen previews say it's as good as the book.

Expect to pay a higher price than ever for grass seed this year. The drought has cut seed yields way down, boosted production costs per acre. Bluegrass is most seriously affected—it is most widely produced in present drought areas.



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neers work hand in hand with engineers representing the mill officials and those representing the designers of the conveyor equipment. This mammoth belt system loops under the Pacific Coast's main highway (No. 99) and over three transcontinental railroad lines. Its savings in time and money are almost impossible to calculate.

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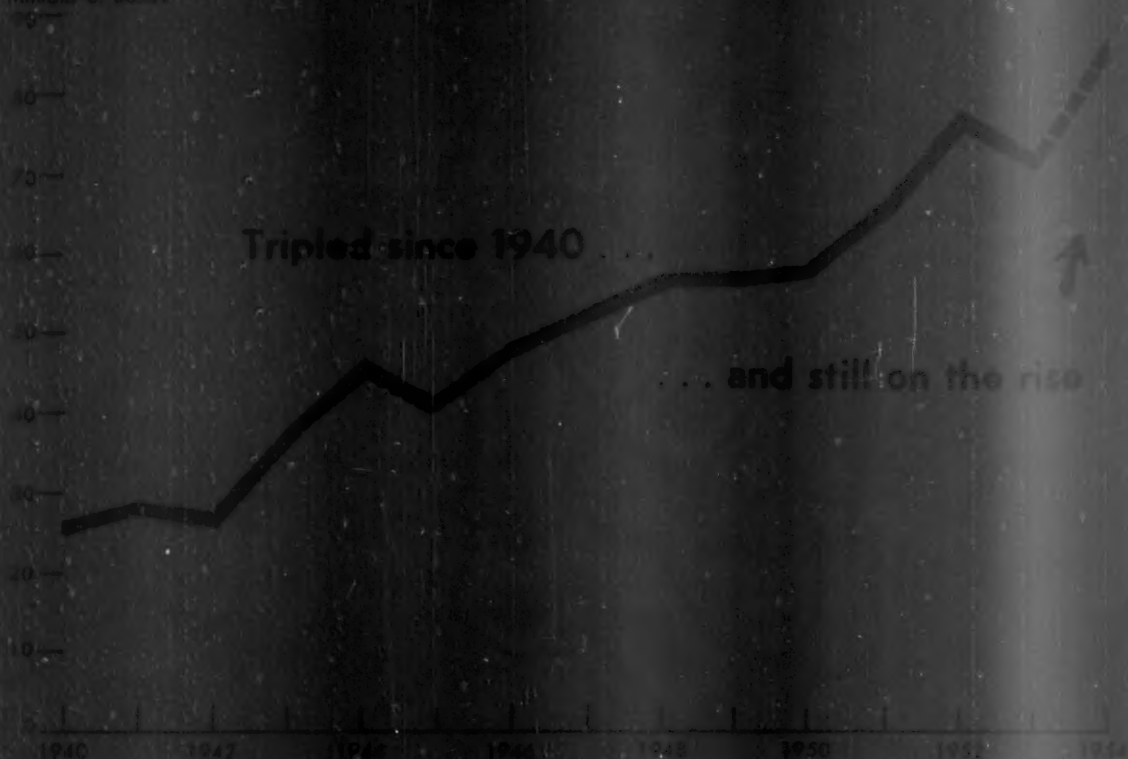
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COMMODITIES

The Florida Orange Crop

Amount of Boxes



Too Much for the Juice Processors

There are far too many oranges in Florida this season (chart) for the peace of mind of the frozen orange juice industry, the nation's biggest buyer of the fruit.

The concentrators ordinarily don't mind having an ample supply of cheap oranges as their raw material. What galls them now is that they were caught long on supplies at \$1.49 a box before the Agriculture Dept. revised its crop forecast, driving raw oranges down as low as \$1 a box. And the price may go still lower on final upward revisions of the crop size.

As a result, processors who thought they were being prudent in buying early are now selling the canned frozen concentrate at little or no profit—maybe even at a fraction of a cent loss per can.

• **Demand Is There**—Ever since it started in 1946, the frozen orange juice business has been growing. Last year, about 30% of U.S. families bought canned frozen juice—some 50-million gal. of it.

The demand curve for frozen orange juice should be a classical economist's delight. It's about as elastic as demand can get. Lower the price and consumption spurts; raise and consumption drops. Put the price up to 29¢ or 30¢ a 6-oz. can at retail and consumption just about stops.

Right now, juice retails at an all-time low: a nationwide average of 14.1¢ per 6-oz. can. And consumption has risen from a weekly average of 931,000 gal. in December to an all-time high of more than 1.3-million gal. in the week ended Feb. 20. That's at an annual rate of 70-million gal., compared with last year's actual consumption of 50-million gal.

• **Supply Fluctuates**—Meanwhile, supply has been bouncing crazily. Last year, for example, there weren't enough oranges. The Florida crop came to 72-million boxes, 7-million lower than the year before. Toward the end of the processing season last June (the year's pack is put up between Dec. 1 and the

end of June) the price of raw oranges for processing was up to \$2.40 a box. And the retail price of juice hit an average of 19.1¢ per can by the following November.

This season, the truth about the orange crop has been slow in dawning. Last October, the Agriculture Dept. estimated a Florida crop of 79-million boxes. That sounded good compared with 72-million the year before, and some processors began buying heavily at \$1.49 a box. Early buying looked like good insurance against a freeze that might hit the citrus groves.

By January, however, Agriculture Dept. was estimating 82-million boxes. And in February the estimate was jumped to 86-million. Most private guesses put the crop even bigger—more like 92-million boxes.

• **Price Slide**—With the supply expanding like this, the price per box was bound to drop. And it did. Processors can buy now at \$1 to \$1.25 a box. The catch is that the concentrators started



meeting place of nations

In 1947 the chief U. S. delegate to the United Nations asked of his fellow delegates:

"Where will we find a place where railroads and wonderful highways and a great river all come together to bear the burden of humanity and of goods and of communications...?"

That place for the United Nations' headquarters was found in New York.

No city is more truly a meeting place for exchanging the goods of the world. Through the Port of New York flows about half of the \$25 billion or more in cargoes that make up America's foreign trade. Out go machine tools and farm implements... flour and fertilizer... bulldozers

and bicycles... shoes and steel and petroleum and a thousand other items.

In come olives from Greece, woolens from Britain, cameras from Germany, cheeses from Switzerland, and many other products from many other countries—making overseas trade truly a two-way street.

The Chase knows this story of two-way trade; has helped to write many a chapter. In Greater New York alone, you'll find 29 Chase offices engaged in financing overseas trade... one in the very shadow of the U. N. Secretariat Building. Within the United States, the Chase has the largest correspondent system

of any American bank. Abroad you'll find Chase branches and representatives' offices in Europe, Latin America, the Far East—and in market places around the globe Chase maintains close working relationships with leading banks.

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STEELCASE

BUSINESS EQUIPMENT



their pack earlier than usual. They had packed nearly 13-million gal. by early January, compared with 6-million gal. the season before. About half the season's pack was already put up by the time raw oranges began to drop much in price.

Fortunately, the concentrators had started the packing season with very low inventories from the previous pack, so much of the early pack moved directly into consumption. But every can that wasn't sold then, and every can that was packed in midwinter, is now selling at a price that makes the processors wince.

• **Hard to Plan**—The situation points up the concentrators' big complaint: It's almost impossible to plan sensibly.

The only clue to the supply of raw material—and its price—is the Agriculture forecast. In the previous season, Agriculture had estimated 81-million boxes from Florida; when the crop wound up at 72-million boxes, the juicers were caught short. To complete their pack, they had to buy at abnormally high prices. This year, of course, they would never have paid \$1.49 a box if they had known the crop would come to 86-million boxes or perhaps even more.

The long-term outlook is for still more oranges. Continental Can Co. has counted the young trees that will begin to bear in the next three years, and it predicts a crop of 104-million boxes of Florida oranges by 1956-57. The increase is destined to be absorbed by the concentrators, just as they have taken up the entire increase in Florida's orange crop since the war.

• **Private Labels**—More of a problem—and one that is fraying tempers in this time of trouble for several big concentrators—is the splitting of the market between nationally advertised brands and the private labels. They share now on a 50-50 basis, but experience proves that price is a weighty factor. The consumer will pay up to 2¢ more a can for the national brand than for a private brand; beyond that the customers switch in droves. Private brands led the last two retail price cuts.

The thing that especially irks the national brands is this: Some of the private labels actually are grower co-operatives that don't have to worry about buying supplies in advance—they just take all the oranges their members grow and sell the juice for whatever it will bring. This almost automatically makes them price-cutters—in a good crop year.

National brands also buy some of their supply as they go along, and they get some through grower participation plans.

But they do have to go out on a limb, as they did last November. And sometimes the limb breaks.



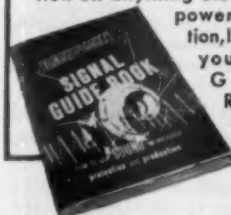
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UNDERWOOD-SUNDSTRAND 10 key adding machine. 10 columns with subtraction. Prints on standard paper roll.	\$125.00	\$383	\$258.00	MONROE Calculator MA7W—High speed electric. Automatic division. De Luxe Unit.	\$179.50	\$450	\$290.50

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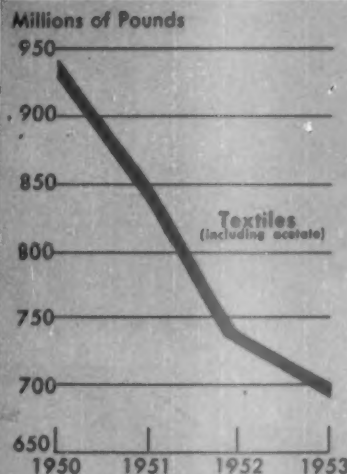
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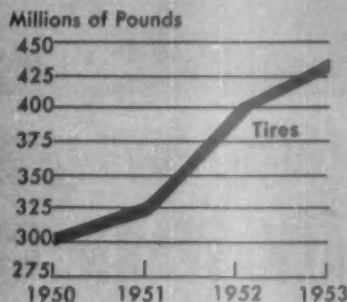
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We'll buy your present fleet!

Rayon Use...



... in Textiles is still slumping ...



... but in Tires it's way up

Data: Textile Economics Bureau, Inc.

One Up for Rayon

Rayon makers' spirits, which have sagged with the textile market (top), are getting a lift from what's happening in tire cord (bottom).

In a relatively short period of time, high-tenacity rayon has just about cornered the tire cord market in a sweeping expansion.

In 1951, about 58% of all tire cord production was rayon; by 1953, it was more than 90%.

This bright spot has helped rayon men swallow the textile trend. Both production and consumption of rayon for textiles got off to a healthy start in 1953, then tumbled downward later in the year.

Production ended up 3% ahead of 1952, but consumption ran approximately 4% behind and stocks were piled quite a lot higher than they were at the end of 1952.

Whoever You Are . . . Whatever Your Business . . . An R/M Product Touches Your Life



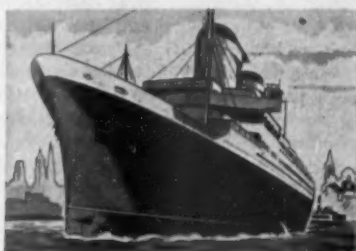
HOW TO PUT A TWINKLE IN A TOWN'S EYES—WITH R/M PACKINGS

A town's gleaming nighttime smile begins miles away—more than likely with the aid of R/M Packings. To generate electricity, steam and water must be held under critical pressures in central power-station equipment. And reliable Raybestos-Manhattan packings hold them safely—in generators, burners, heaters, pumps, valves, condensers, compressors. In fact, you'll find R/M packings and gaskets wherever gases, acids, sewage, oil, wine, steam, water and other fluids are pumped under

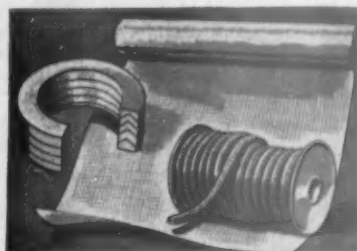
pressure. For R/M makes these compressible packing materials in a wide variety of sizes and types to suit any requirement. But packings are only one example of R/M's specialized skills. Throughout industry and in your home, your life is touched by hundreds of asbestos, rubber, engineered plastic and sintered metal products made in R/M's seven great plants and laboratories. If you have a problem involving any of these materials, call in an R/M representative.



Because milk and other food products must be produced under the most sanitary conditions, R/M develops specialized packings for the dairy and food processing industries. Specially designed and compounded, these hold in pressures, seal out impurities, and are noncontaminating themselves.



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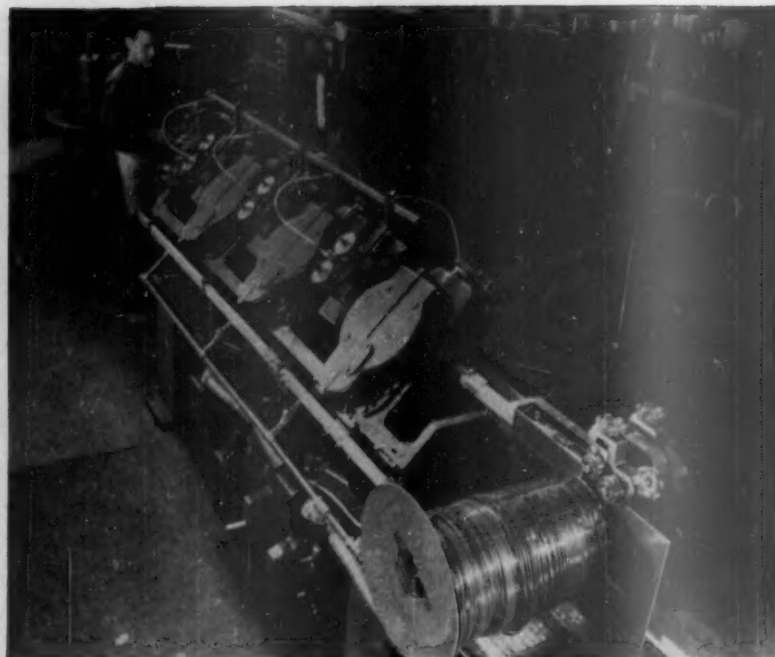
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Factory Jobs for Silver

Silver is moving off the dinner table and into the factory. Today far more of it is used in stolid industrial ways than ever turns up in the traditional trays and bowls and jewelry and the whole arsenal of the eater.

Handy & Harman, largest U.S. silver fabricator and the keeper of the industry's statistics, says that about 60% of noncoinage consumption of silver is now in industry, with the remaining 40% destined to bolster gracious living. Before World War II, the percentages were almost exactly reversed.

• **Shortages**—For a long time, industrial uses of silver had been inhibited by the general idea that it was just a precious metal, suitable only for decoration. The big change came when World War II shortages of copper, nickel, and aluminum caused silver to be tried out as a substitute. It passed the tests, and just at a time when there was plenty of it to be used.

The big supply was caused by defense need for copper and nickel, both essential ingredients in the decorative use of silver. When copper and nickel were put on allocation, silver became technologically unemployed.

Silver found many wartime industrial uses. When peace came, some were abandoned but some were continued. The high price of silver was balanced by the fact that a little of it goes a long way in some industrial uses.

The chief industrial use is in silver

brazing alloys, used to form a bond or joint between metals. These alloys were developed more than 20 years ago; use of them has spread rapidly. A small addition of silver gives a solder that will flow at relatively low temperatures, often an important factor in brazing. The joints have a high degree of electrical and heat conductivity, and are as strong as the metals they join.

Another growing market is in the electrical and electronic industries. Radar, particularly, is important. Here again, silver's high conductivity and resistance to corrosion mean that a little will go a long way.

• **Steady Market**—The price of silver has been remarkably stable over the past few years, in comparison with other metals. This stability can be traced directly to the government policies of the two major producers, Mexico and the U.S.

The U.S. Treasury is committed by the Silver Purchase Act of 1946 to buy all domestically mined silver at a fixed price of 90.5¢ an ounce. Since this is almost always well above the market price (which currently is a little over 85¢ an ounce), it means that a substantial part of the world production of silver is taken off world markets.

Since Mexico is the largest silver producer, its policy plays an important role in the price. By buying and selling large quantities of silver (all in Mexico) the Bank of Mexico effectively controls the world price level.



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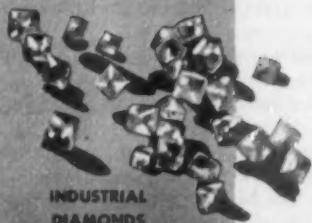
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**INDUSTRIAL
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"Sell it and make your fortune Mynheer Van Niekirk"

It was the year 1876. Free America was 100 years old and there were great celebrations in Philadelphia. In London, Queen Victoria was proclaimed Empress of India.

In South Africa, children playing by the Orange River found a bright pebble, too pretty to throw away, but when trader Van Niekirk offered to buy it they shouted with laughter and told him to sell it and make his fortune.

But, nobody wanted to buy the pebble so Van Niekirk dropped it in an envelope and mailed it to a government agent who declared it to be a diamond of 21 carats. Then, the governor of the Colony bought it for five hundred pounds and sent it to the Paris Exhibition as a curiosity.

Nobody paid much attention, but this was the first clue to the existence of the diamond fields that would one day pour out fabulous treasures in gems—and in industrial diamonds, those incomparable cutting points which do so much to increase production and reduce costs.

The diamond fields are but 75 years old, and for 43 of those years we have specialized in importing and selling industrial diamonds and manufacturing industrial diamond tools—engineered to your job and guaranteed to do it. Please write for our catalogs.

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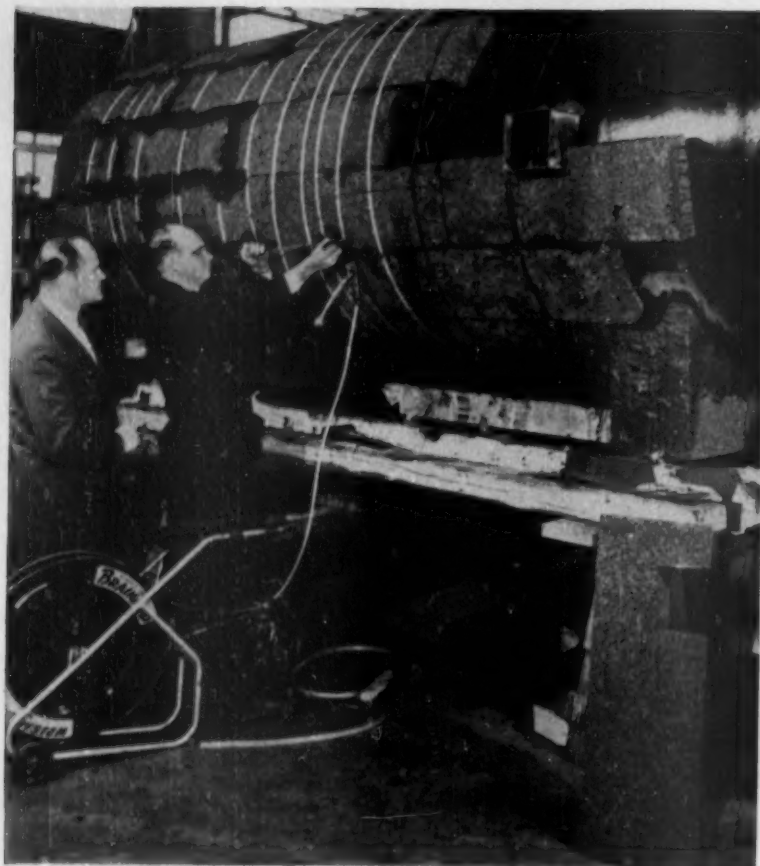


Photo courtesy Liquid Carbonic Corporation

BRAINARD STRAPPING SERVICE

Wraps up an insulation problem

• Here's a vital step in Brainard service—showing how it's done.

Sydney White, one of Brainard's Chicago salesmen, was called in to help work out a better method of securing insulation on these liquefied gas containers. After analyzing the problem, he recommended Brainard galvanized strapping—to resist moisture from condensation. He demonstrated special tools—that permit strapping tightly on a curved surface. Result—a satisfactory solution that saves labor and materials in the bargain.

Call your nearby Brainard salesman for this kind of service on your packaging and materials-handling. Brainard offices located throughout the U. S. and in Canada. For booklet on Brainard Strapping System write Brainard Steel Division, Dept. P-3, Griswold Street, Warren, Ohio.



For booklet on Brainard Strapping System write Brainard Steel Division, Dept. P-3, Griswold St., Warren, Ohio.

STEEL STRAPPING

COMMODITIES BRIEFS

Kennecott Copper Corp. and **Anaconda Copper Mining Co.**, bothered by a weak market, have asked the Chilean government for permission to cut production in their Chilean mines by some 30%. Both companies have already made sharp cuts in their U.S. production.

Output of aviation gas last year totaled almost 90-million bbl.—12% over 1952's figure—according to the Bureau of Mines. Avgas was once the most critically short of all petroleum products because of a dearth of alkylate, an important ingredient. The government's alkylate expansion program has now reached its goal; supplies are ample.

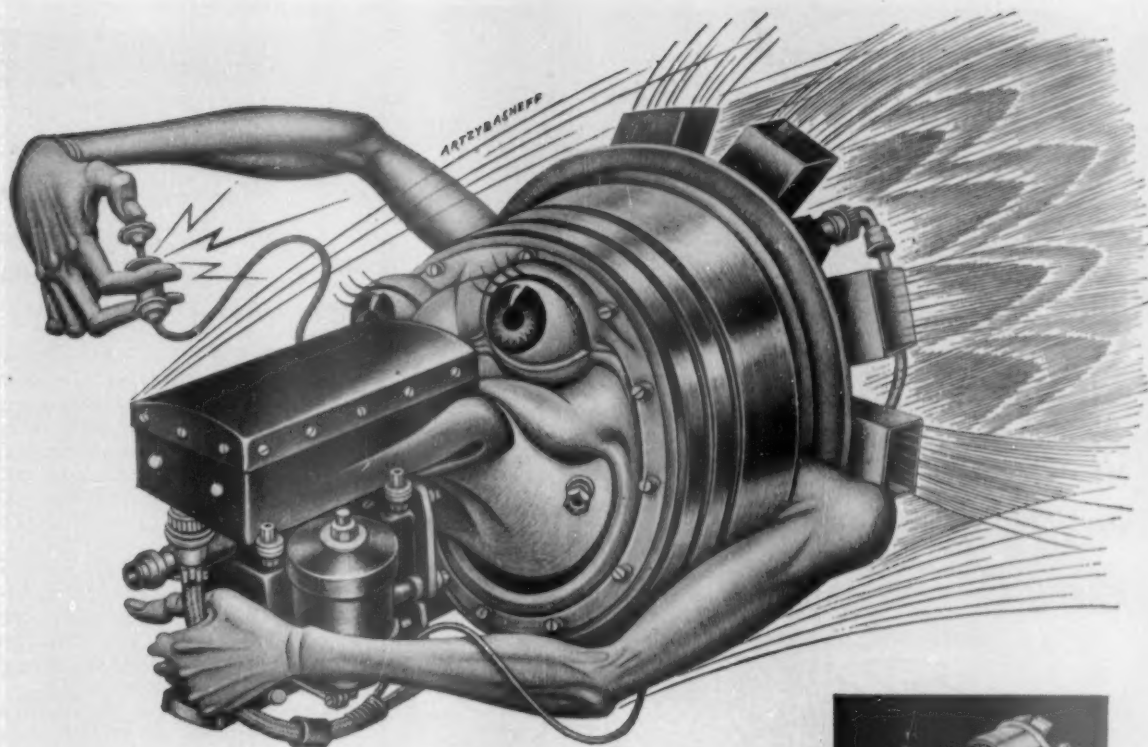
Synthetics parley: International Congress of Man-Made Textiles will meet in Paris, starting May 21. The meeting, first of its kind, will bring together synthetic yarn and fabric producers, marketers, and consumers to discuss technological and economic problems.

Secretary of Agriculture Benson has asked Congress to raise Commodity Credit Corp.'s borrowing authority from \$6.7-billion to \$8.5-billion. At the end of 1953, CCC had almost \$5.7-billion tied up in price-support loans and inventories. Unofficial estimates say that CCC had \$6.4-billion of its borrowing authority in use by the end of February.

Butter and cheese have been moving into the government stockpile at a phenomenal rate. Dealers are eager to sell every pound they can to the government before support prices drop at the end of March. Government purchases of butter alone have just about doubled since mid-January.

A new wool industry may be budding in South Carolina. Two wool-combing companies—Wellman Combing Co. and Amedee Prouvost & Sons (a French firm)—have announced plans to build mills there. First shipments of wool from Australia and South Africa will arrive at the port of Charleston in April.

Iron ore shipping season on the Great Lakes will be delayed this year, and the total amount of ore shipped will be well under last year's record. Steel mills are using less, and their inventories are high. The shipping season usually starts in late March or early April; this year mills will have plenty of ore on hand even if they don't get new deliveries until May.



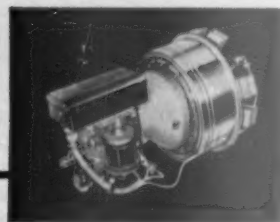
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Good news for new-born jets! This typewriter-size Bendix Aviation self-starter is built-in . . . develops 340 horsepower in just 3½ seconds . . . enables a jet's main engine turbine to reach take-off speed in a matter of seconds after the pilot hits the starter. No more precious minutes lost while ground crews bring up mobile auxiliary starting power! For 14 of the rugged, dependable, precision-machined parts that make up this self-starter for jets . . . Eclipse-Pioneer Division of BENDIX AVIATION CORPORATION looks to Lycoming.

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In your building or plant this waste may well be costing far more than the price of an adequate system. So a circuit analysis can lead to significant economies. For a sound businesslike approach to your electrical future, call the man who specializes in problems like yours . . . your NECA Qualified Contractor. Whatever your electrical requirements, your NECA Contractor has the facilities, the knowledge, the experience, and the men to handle the job.

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GOVERNMENT

New Friend . . .

. . . for business is BDSA, a Commerce Dept. agency that will give industries almost any kind of help.

Secretary of Commerce Sinclair Weeks' attempt to revive his department as "a service agency for business" is drawing in a lot of customers. Companies of all sizes and kinds are seeking—and getting—a helping hand from the industry divisions of Weeks' new Business & Defense Services Administration.

Under the direction of Charles F. Honeywell, California and Hawaii businessman, BDSA officials have been taking up the cudgel with other government agencies—and coming through with an excellent batting average.

- **Homers**—For instance, BDSA chalks up for itself some major victories in helping businessmen who are either hit by foreign competition or fearful that another U.S. agency will encourage competition from abroad. BDSA has worked with Treasury on behalf of the Hardboard Assn.'s petition to invoke the antidumping act on hardboard imports from Sweden and Finland. It also got a formal commitment from the Export-Import Bank not to grant new loans for foreign pulp and paper projects without consulting the domestic industry. U.S. pulp and paper makers had been disturbed by the bank's overseas investment in this field.

BDSA has also helped line up overseas business for U.S. firms. It has:

- Made a technical study of microwave radio equipment and cable in Ecuador;

- Compiled needs for communications equipment of U. S. air bases to be built in Spain;

- Proposed United States construction firms as potential bidders on a tunnel job in Rio de Janeiro;

- Recommended an Export-Import Bank loan guarantee for a textile machinery producer with a \$250,000 order in Greece.

- **Other Bureaus**—Contact with other government bureaus—especially the military—has also been a big thing. Examples:

- Venetian blind manufacturers object to federal specifications on their goods. BDSA's consumer durable goods division is drafting revisions to make the specs more satisfactory to the industry.

- Makers of wooden grain bins



Read how a bad plant fire was stopped from growing ten times worse—by a few gallons of transformer fluid.

Photo courtesy General Electric Company

Prevented: \$500,000 fire loss!

A sudden fire loss can leave you stunned—and out of business.

But the owner of the transformers shown above found a silver lining when the smoke clouds cleared.

Swept by a \$50,000 plant fire, these four transformers—and eight others like them—could have caused an estimated \$500,000 additional plant damage—if the transformers had been oil-cooled and installed, as these were, without a fireproof vault.

But *these* twelve transformers were virtually unharmed!

Their interiors were in perfect

shape. Repairmen did not even have to filter the cooling fluid. The only reconditioning needed was the replacement of a few porcelain bushings cracked by heat, a new paint job, and new cooling fluid to make up for a little fluid lost through the cracked bushings.

The secret of the modern nonflammable transformer is in *this fluid* which cools, insulates—and *does not burn*.

This fluid makes possible transformers that can be installed quickly, indoors or out, without need for ex-

pensive fireproof vaults. Transformers can be located conveniently at plant load centers, often saving 50% or more on copper conductors, up to 40% on over-all installation cost. Not one has ever burned or contributed to a fire.

Much of this safety fluid is made with a special blend of Hooker Chemicals, which we supply to the people who build transformers.

Hooker Chemicals play an unseen but important part in performing hundreds of useful jobs like this—serving the many industries that make our world what it is today.



How can your business profit from Hooker Chemicals?

A free booklet "From the Salt of the Earth" tells how 30 industries use chemicals derived from salt. Also, Bulletin 100 describes Hooker products and how they may be useful to you. Send for both. Write to Hooker Electrochemical Company, 21 Forty-seventh St., Niagara Falls, New York.

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Position Vacant

Sales Executive—Assistant to President. Must have thorough background in conveyor industry. Age preferred 40-50. Midwest. Please reply Box P-1407, Business Week.

Selling Opportunity Offered

Manufacturer of liquid soaps and cleaners for sale direct to retail and representation in Southeastern, Middle Atlantic, and Midwestern states on a commission basis, with an extra commission for new accounts. RW-1851, Business Week.

Positions Wanted

Does your Company need a top sales conscious executive at 41. Can offer industrial executive experience with Chemical Engineers training. Principles only. Reply Box PW-1940, Business Week.

Sales Promotion in Mexico increased sales of steel office equipment 34% in Mexico's humid coastal regions. Can name many equal sales increases, citing names, times, places, percentages. Write now for full facts—for yourself or a favored client. PW-1949, Business Week.

Manufacturing Executive, cost conscious, Works Manager and Plant Manager, Age 50, with background in consulting work, seeks permanent challenging position—PW-1983, Business Week.

Sales Executive, 36, Business & Pre-Legal Majors grad., 5 yrs. Army Finance—Discharged Major, 1 yea. Co-mgr & Co-owner, Ret. Hdware & Elect. Appl., desires sales or sales promotion position. PW-1987, Business Week.

Textile Executive 33, Qualified in Engineering, Finishing and Production Control. Was Project Engineer during construction of 600 Piece Mill and now in position of Plant Superintendent. Desire more challenging opportunity in Textile Machinery Manufacturing or Management of Finishing Plant. Complete resume and references on request. PW-1995, Business Week.

B.S. & M.B.A. with three years' experience in the electrical industry. Desires product development or sales position in other than large company. Reply Box PW-1993, Business Week.

Sales Executive—47 Engineering graduate technical industrial, mining, petroleum sales. Mid-continent area or locate anywhere. PW-2020, Business Week.

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Mfr's Rep. Chicago desires one additional account production item for auto. and farm machinery production or non-ferrous wire. RA-1914, Business Week.

Established manufacturer's representative, graduate engineer, needs additional lines. Operates south central Pennsylvania, calling on architects, contractors and industrialists. RA-1951, Business Week.

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Oil and gas reserves can be found and profitably developed by those in favorable financial position under the guidance of individual who served 25 years with companies in oil and gas exploration. Drilling deals will be available ranging from those with more risk and chance for great profit to those with less risk and chance for reasonable profit. All will have geological merit. Please reply BO-2022, Business Week.

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Will sell or rent: 1 Monitor type building with cranes, suitable for steel fabrication or foundry; 1 Machine Shop or light manufacturing building; 1 Storage building. Total approx. 40,000 sq. ft. Power, steam heat, water, sewer, C.R.R. of N.J. siding. All on 22 acres, fenced, near N.J. Highway 22 at Raritan, N. J. BO-2007, Business Week.

Racine, Wisc's, busiest business dist., 40'x100', Depth—4 ft.—New 7'x7' elevator—new auto. Oil Furn.—Tiled Fl.—Fluorescent Light.—DBI door fr. & rr. ent.—lg. loading dock & sep. base, ent. 17,000 sq.ft. fl. space; can be enlarged to 21,000 if desired. J. E. Kovach, 626 W. Lawn Av. Racine, Wisc.

EQUIPMENT

For Sale

Executive Aircraft for sale—1952 hp. Jacobs engine. Full gyro instruments, Omni, ILS Local, Inter. Lear ADF-12. Other extras. Complete paint. Gray with Maroon trim. \$13,500. Russell F. Hay, Inc., Allegheny County Airport, Dravosburg, Pa. HOmestead 1-6800.

INDUSTRIAL SITE

Factory building in South: Will build air-conditioned, one story steel and masonry plant at \$4.25 per square foot. Lease or time purchase plan. Some buildings now available. Charleston Development Board, Charleston, S. C.

are ruffled because Commodity Credit Corp. buys only aluminum and steel bins. So the forest products division is paving the way for future CCC purchase of wooden bins.

• **Markets**—Another broad field of aid has been to help business firms land new markets, cities lure new business. A West Coast chain saw manufacturer, for instance, got help in setting up new sales outlets in Southern timber producing areas. The manufacturer's allocation of sales, quotas, and promotion was based largely on BDSA data on the timber industry.

The agency's automotive division is helping a vehicle maker and a parts producer get into new lines. The scientific instruments division is lending a hand to the Fargo (N. D.) Chamber of Commerce, which wants to attract new industry to its community—preferably optical instrument companies.

Big companies come to BDSA for help, too. Borg-Warner Corp. has sought research advice to study market potentials for a new heating and cooling unit. U. S. Steel Corp.'s National Tube Div. has asked for the same kind of aid.

• **For All Tastes**—No matter what your business, you're likely to find a BDSA industry division with jurisdiction over your field. There are 26, including an office of distribution for wholesalers, retailers, and the like. For the most part, division directors are executives on leave from their companies—but still on payrolls—for six months. To maintain some organizational continuity, BDSA chooses career civil service men—each familiar with a particular industry—as its deputy directors.

BDSA is under the aegis of the Assistant Secretary of Commerce for Domestic Affairs, 57-year-old Lothair Teetor, an Indiana piston manufacturer. He took over last October from fountain pen maker Craig R. Sheaffer, who had left two months earlier, after his controversial role in the Bureau of Standards hassle over the AD-X2 battery additive (BW—Nov. 21 '53, p. 30).

• **With Finesse**—BDSA's administrator, Charles F. Honeywell, went to work in Weeks' Boston office soon after the November, 1952, elections. His task: to help the Secretary-designate "revitalize" the department and develop a more hearty departmental program for business than had been exhibited during the previous 20 years. BDSA was their brainchild.

The agency has a delicate role. It's supposed to be a "friend in court" in Washington for industry. But it's not supposed to act like a business lobby inside the government.

Says Honeywell: "We play the role of an intermediary. We understand industry's point of view, and merely set the stage for industry to talk to appropriate government agencies."

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It'll Take Intelligence—and Hustle

If consumers can be made to spend, there is no reason for a business decline. This belief is held by many economists, including Arno Johnson, vice-president of J. Walter Thompson Co., who ranks as an authority on consumers' spending patterns (page 124).

Johnson believes consumers have the money to buy.

But he feels it will take real salesmanship to sell them. He doesn't mean mere high-pressure selling—mere loudness. He means intelligent salesmanship, well planned and aggressive.

There is vast room for improvement, for instance, in the automobile business. Johnson feels that auto salesmen have become order-takers rather than sellers, and he scoffs at the moans that the auto field is saturated. In fact, Johnson does not believe that there is such a thing as saturation.

Making a sale, of course, requires more than a telephone call. The fact that some cars are selling faster than others (BW—Mar.6'54,p29) indicates differences in sales effectiveness. From the manufacturer's standpoint, it is a matter of good style, performance, and the right colors. From the dealer's standpoint, it's a matter of the right approach and plenty of hustle. And most important, there has to be a real effort to go out and reach millions of new customers who make up a vast potential market. In the days of the boom, they were never even approached.

There may not be, as Johnson believes, a market for over 6.1-million new cars this year. But we'll never find out by not trying. This much can be said: The customers have the money. It is up to business to sell them.

No Extravagance

Most businessmen cannot operate effectively without good statistical information. That is why they will be interested in the report of the nine private experts who surveyed the statistics compiled by the government (page 113). This report makes disturbing reading, for it shows just how inadequate the statistics are.

It is distressing to find this out, especially at a time of business decline. But for this very reason, we welcome the report. The longer we wait for a revision of benchmarks, the greater is the possibility of increasing the margin of error in all our estimates. We may end up, as the report warns, with figures on our gross national product that are nothing but "a hollow shell."

The real value of this warning is that it should stimulate prompt action. The committee has urged spending \$26-million this year to revise the government's statistical program. We hope that the Administration adopts this suggestion, and that Congress appropriates

the funds. The \$26-million is not an extravagance. It will provide a guide by which businessmen will make decisions involving millions of dollars, and by which the government will make decisions involving billions. It is more than that. Our indexes of business activity form the basis of action for both business and government. This month the entire nation (BW—Feb.27'54,p25) is watching them; the Administration is pledged to act on them. If these sensitive business indicators are badly off base, action may be taken when no action is called for. Poor statistics leave us half-blind. The nation's welfare depends on having the most accurate information possible.

To Study Welfare Funds

Health, welfare, and pension funds have become vital to millions of U.S. workers. They safeguard much of the nation's work force.

Like insurance companies—and often through insurance companies—the funds help pay doctor and hospital bills, cushion widows and children from poverty, and provide pensions.

Congress plans to investigate reported corruption in the funds (BW—Feb.27'54,p142). It is looking toward legislation that will "protect and conserve" these funds. Behind this move is clearly a concern over charges of corruption and a desire to insure that workers covered by all welfare funds receive the benefits to which they are entitled.

The study is worth doing, provided some things are kept firmly in mind. Among them:

- Welfare funds—or at least the great majority of them—are honestly and efficiently administered. These funds should be continued and developed.

- Administrators of welfare funds—particularly union administrators—face little-publicized problems, many of them peculiar to a specific employer-union relationship. For this reason, administration costs may be justifiably much higher for one fund than for another. It won't always be possible to measure them all against the same yardstick.

The study will be in a field about which little is really known. It may gather information that points to the need for federal legislation. It may also indicate that welfare funds are best regulated by state law. Or it may reveal that employers—who under the Taft-Hartley law are required to share the trusteeship of such funds with the unions—should be paying more attention to these responsibilities. This, rather than legislation, may be the best prescription.

All this suggests that businessmen, as well as labor, have a big stake in a fair and thorough inquiry.

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ON THIS
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BRANCH OFFICES IN PRINCIPAL CITIES

Cross section, showing redesigned refrigerator door frame made of interlocking Harvey aluminum extrusions and rubber insulation. Previous design required 85 hand-set screws. New design requires 8.

An independent producer of aluminum extrusions in all alloys and all sizes; special extrusions, pressure forgings, bar stock, forging stock, tubes, impact extrusions, aluminum screw machine products and related products.

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B. F. Goodrich Chemical Company does not make the radio frequency cables. We supply only the Geon polyvinyl plastic compound for the jacketing.

TALKING TOWER *speeds army commands*

NEWEST in U. S. Army Signal Corps communications is the Microwave Relay Radio Tower, which will throw or catch a message at an average distance of 30 miles. These towers include transmitter and receiver and replace wire lines between headquarters and forward positions—a chain of command that can't be cut.

Pictured are signalmen checking outgoing frequency and localizing trouble in the orderly maze of circuits. All three are using radio frequency cables jacketed with Geon polyvinyl mate-

rials. The constant flexing and rough usage require the toughest covering and Geon meets military specifications.

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mation, please write Dept. A-3, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.



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